SONY

ビデオプレゼンテーションスタンド
VIDEO PRESENTATION STAND

# VID-P100

## SERVICE MANUAL

## 補修部品表

1st Edition

# SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

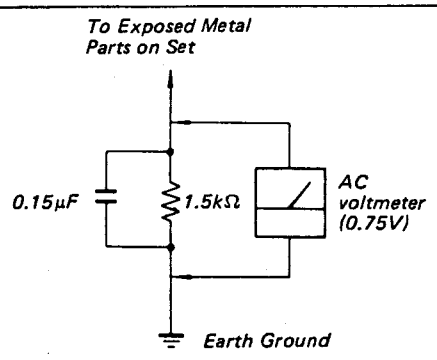


*Fig. A. Using an AC voltmeter to check AC leakage.*

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# はじめに

ビデオプレゼンテーションスタンド VID-P100　をお使いになると、通常の文書、OHP（オーバーヘッドプロジェクター）用シート、スライド、ネガフィルムなどの視覚教材や立体物等の資料を、カラーカメラを通してモニターテレビやプロジェクターに映し出せます。

## 本機の特長

### 接続が簡単

カメラ、レンズ、照明、電源をすべて内蔵しているので、モニターテレビを接続するだけで教材や資料を映し出せます。

### きれいな映像

38 万画素（有効）の 1/3 インチ CCD 撮像素子を使用しているので、水平解像度 420 本と小型ながらも鮮明な映像を映し出せます。また、S 映像出力端子を装備していますので、S 映像入力端子付きのモニターテレビやプロジェクターに接続すると、より解像度の高い映像を実現できます。

### 各種調整が簡単

フォーカス、絞り、ホワイトバランスが、常に自動的に調整されます。これらの調整値を好みに合わせて変更することもできます。

### すばやいオートフォーカス

レンズにはインナーフォーカスレンズを採用していますので、追従性に優れ、すばやいオートフォーカスが実現できます。

### 10倍ズームレンズ

10倍電動ズームレンズを装備しているので、フィルムサイズから310x235mm までの資料を画面いっぱいに映し出せます。

## カメラの方向切り換えが簡単

カメラ部を上90度に方向を変えた(フリップアップ)後、左右上下に動かせるので、壁の資料や室内の様子、自分自身も映し出せます。

## クローズアップレンズの着脱が簡単

カメラをフリップアップした際、ずらすだけでクローズアップレンズの着脱が行なえます。

## 豊富な被写体

普通紙やOHPシートだけでなく、スライド、ネガフィルムや立体物も映せます。ネガフィルムをご使用の場合は、簡単なボタン操作でネガフィルム用の照明(バックライト)への切り換えやホワイトバランスの切り換えを自動的に行なえます。

## 内蔵バックライト

バックライトを内蔵しているので、OHPシートやスライド、ネガフィルムをきれいに映し出せます。ボタンを押すだけで、通常のアームライトと簡単に切り換えられます。

## ビデオセレクター内蔵

本機はビデオセレクターを内蔵していますので、本機の映像と外部入力に接続したVTRやレーザーディスク等の映像を、お手元で簡単に切り換えることができます。

## マイクミキシング機能

お手持ちのマイクを接続して、スピーカー付きのテレビなどに接続すれば、音声も同時に出力できます。また、外部入力とのミキシングができますので、VTRなど外部入力の映像を表示しながらマイクでコメントを入れることができます。





## 外部制御が可能

RS-232C インターフェースを備えていますので、コンピューターを接続して外部から本機を制御することが可能です。使用コマンドなどの外部制御についての詳細は、別冊の「インターフェースマニュアル」をご覧ください。

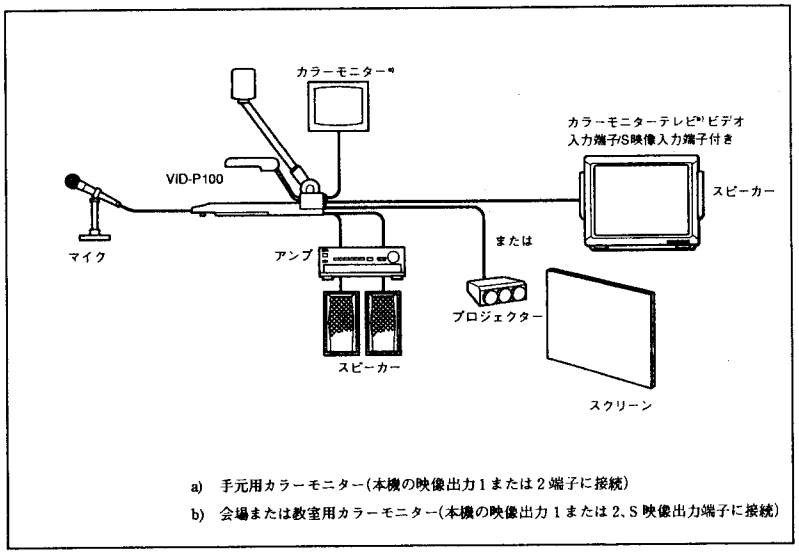
## 移動が容易

簡単に折り畳め、約7.8kgと軽量なので、手軽に持ち運ぶことができ、どこでも容易に資料の提示ができます。

## システム構成例

### 基本システム

本機を使用したプレゼンテーションや教材提示を行なうための基本システムは,次のとおりです。




a) 手元用カラーモニター(本機の映像出力1または2端子に接続)
b) 会場または教室用カラーモニター(本機の映像出力1または2、S映像出力端子に接続)

基本システム



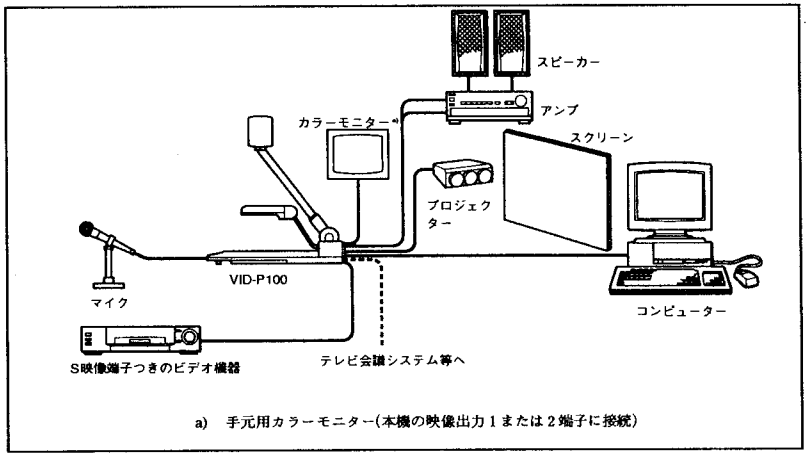


### 応用システム

コンピューターを本機のRS-232C コネクターに接続して、コンピューターから本機を制御したり、外部入力に VTR やレーザーディスクプレイヤーなどのビデオ機器を接続して、本機との映像と切り換えて表示したりできます。

**ご注意**

コンピューターを接続して外部から本機を制御する場合は、 専用のソフトウェアが必要です。ソフトウェアの作成については、別冊の「インターフェースマニュアル」を参照してください。



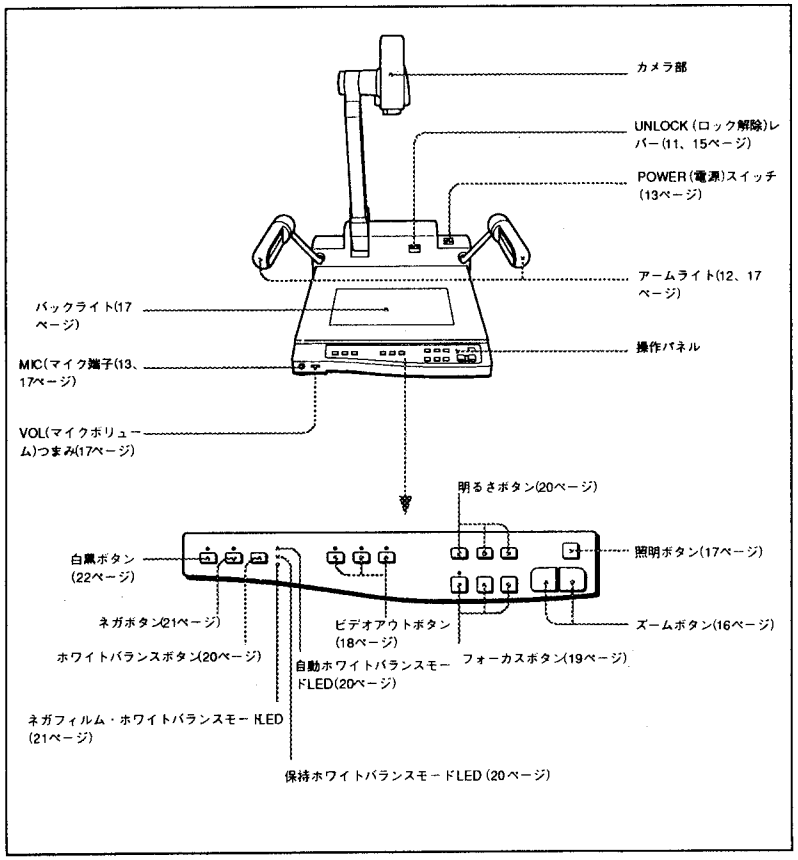

a) 手元用カラーモニター(本機の映像出力1または2端子に接続)

外部制御システム

# 各部の名称

本機の各部の名称は、次のとおりです。各部の詳しい説明については、( )内の参照ページをご覧ください。

## カメラ部と操作パネル



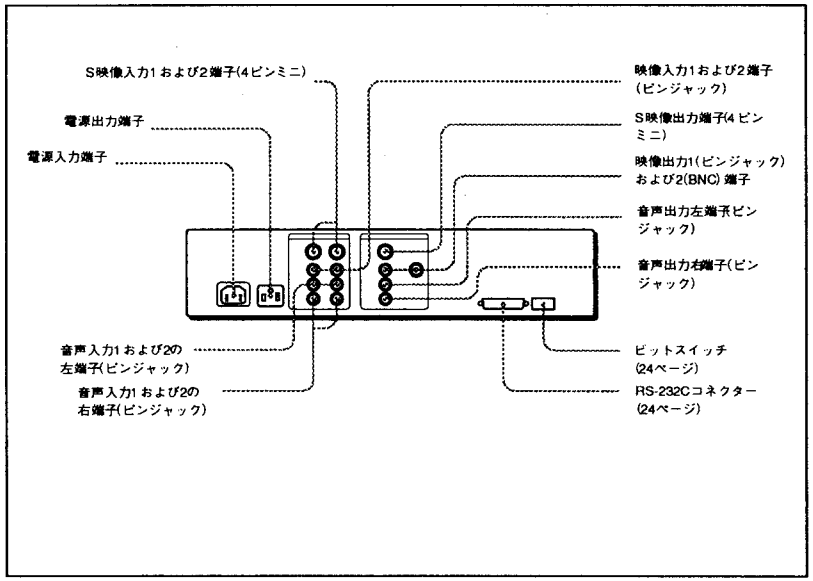

カメラ部と操作パネル





## 裏面パネル

端子の説明については、13ページをご覧ください。




裏面パネル

# 準備と設置

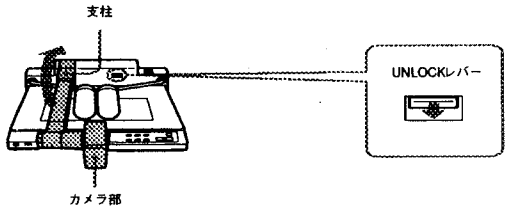
## 使用上のご注意

・使用中は照明用の蛍光灯が熱くなりますので、直接手を触れないように気をつけてください。使用後に折り畳む際は、特に注意してください。
・本体表面が汚れたら、薄い中性洗剤溶液に浸した布で拭いてください。シンナーやベンジン、アルコールなどをお使いになると表面の仕上げを傷めますので、使用しないでください。
・レンズが汚れた場合は、刷毛または柔らかい布で表面を傷つけないように拭いてください。
・蛍光灯がちらついたり、暗くなったときは、お買い上げ店またはソニーのサービス窓口にご相談ください。

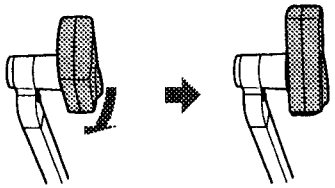
## 設置する

本機は折り畳まれた状態で梱包されています。梱包用のパッケージから取り出したら、まず通常の操作状態に設置してください。

**1** UNLOCK レバーを下に倒しながら、カメラ部ごと支柱を上方向に固定するまで持ち上げます。



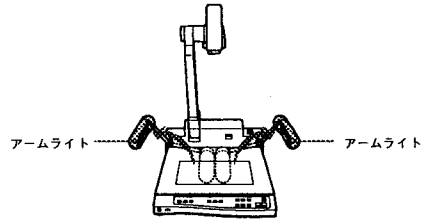

**2** カメラ部のレンズがまっすぐ下を向くように、カメラ部ごと矢印の方向に動かします。





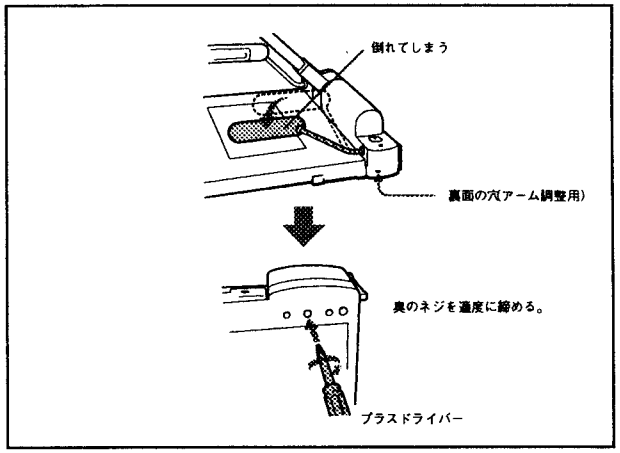


**3** アームライトを2つとも所定の位置に設定します。




## アームライトのアームがゆるんだら

アームライトを持ち上げても固定せずに倒れてしまう場合は、アームを固定している裏面のネジがゆるんでいます。POWER スイッチを切ってから、次の操作手順に従ってネジを締めてください。




アームのネジを締める

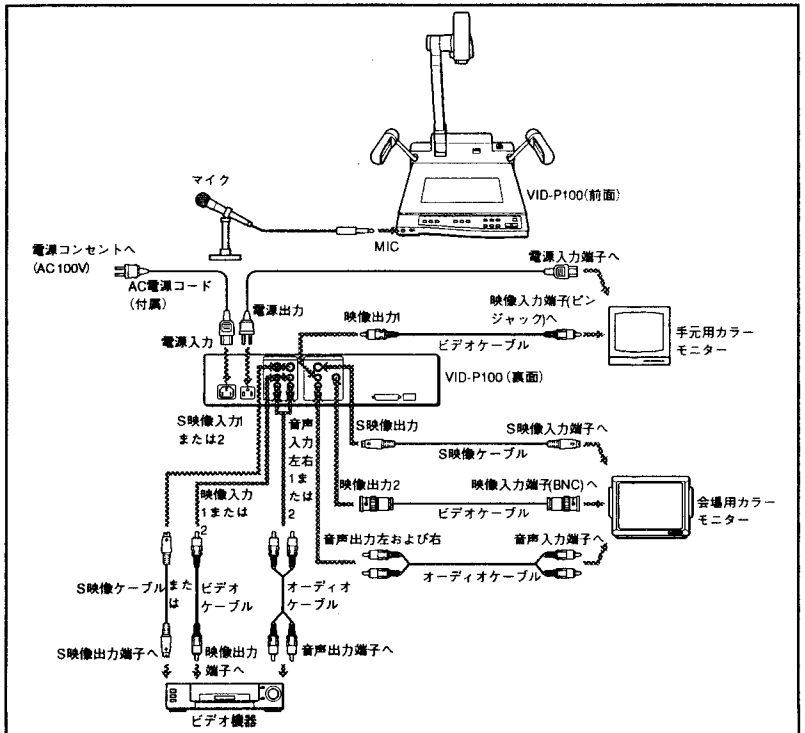
## 接続する

**接続上のご注意**

・接続を行なう前に、本機のPOWER スイッチと接続する機器の電源スイッチをOFF (切)にしてください。

・本機の電源出力端子にモニターなどを接続する際に、その消費電力が300W 以下であることを確認してください。300W を超える機器は接続しないでください。

### 基本システムの接続




**ご注意**

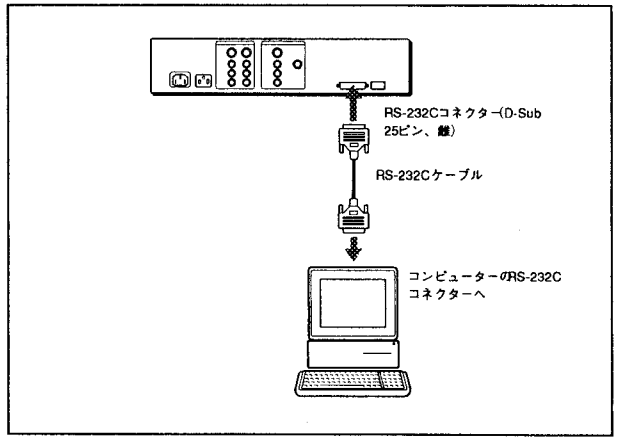
S 映像端子付きビデオ機器の接続には、必ずS 映像端子をお使いください。





### 外部制御を行なうための接続

コンピューターを接続して外部から本機を制御するときは、 基本システムの接続を終えたら、次の図のように接続します。

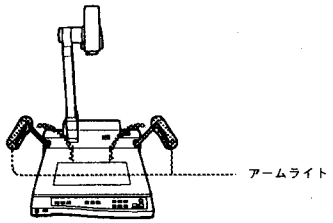



外部制御のための接続

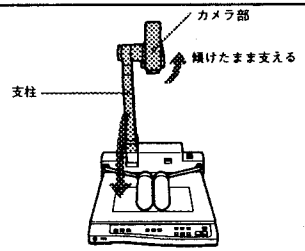
## 本機を使い終わったら

移動の際などに本機を折り畳んで、しまうには、次のように操作します。

**1** アームライトを2つとも畳みます。




**2** カメラ部を支柱の方へ傾けた状態で、支柱を操作パネル側へ畳みます。このとき、支柱は自動的にロックされます。ロックを外して、また操作を行なう場合は「設置する」(11ページ)をご覧ください。






# 操作

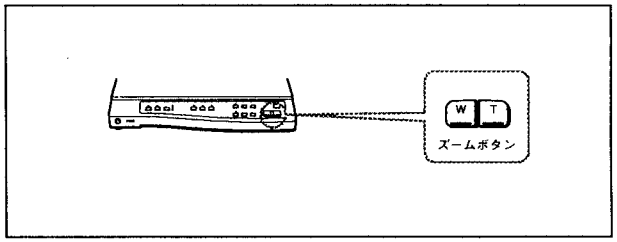
ここでは、通常の資料等を映し出すための基本操作と、ネガフィルムなどの特殊な被写体を映すための応用操作、コンピュータから制御するための操作について説明します。

## 基本操作

本機では、電源投入後、アームライトが点灯し、被写体のフォーカス(ピント合わせ)、絞り(明るさ)、ホワイトバランス(色合い)が自動的に調整されます。
通常の資料を映し出す場合は、画面上の被写体の大きさを調整する(ズームの調整)だけで結構です。

### ズームを調整する

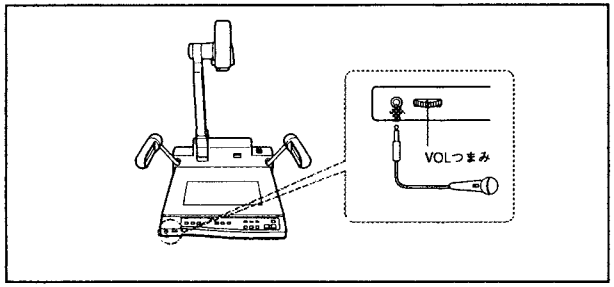
提示物を拡大(ズームイン)したり縮小(ズームアウト)したりするには、操作パネルのズームボタンを使用します。軽く押すと徐々に、強く押すと速くズームインまたはズームアウトします。
提示物を徐々に縮小していくには、W側(広角)を押します。
提示物を徐々に拡大するには、T側(望遠)を押します。




ズーム調整

## マイクの音量を調節する

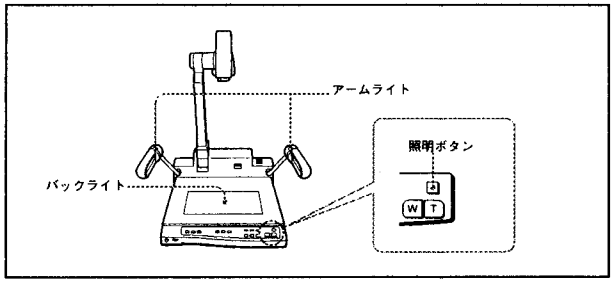
マイクロホンを接続してあるときは、本機の前面にあるVOL つまみで、マイクロホンの音量を調節します。つまみを右に回すと音量は大きくなり、左に回すと小さくなります。




マイクの音量調節

## 照明を切り換える(アームライトとバックライト)

本機では電源を投入すると、アームライトが自動的に点灯します。OHP シートやスライドなどの透明な被写体を映す場合は、操作パネルの照明ボタンを押してアームライトからバックライトに切り換えてください。なお、バックライトが点灯した時点でもう一度照明ボタンを押すと、バックライトは消えます。再度、照明ボタンを押すと、アームライトが点灯します。




照明を切り換える





## 映像を切り換える

本機のカメラ部からの映像信号とマイクからの音声信号を含めて、どの映像および音声信号を出力するかを、操作パネルのビデオアウトボタンで切り換えることができます。

**本機のカメラで撮った映像とマイクからの音声を出力するには**

電源投入時には、VID ボタンのランプが点灯し、自動的に本機のカメラ部からの映像信号とMIC 端子に接続したマイクからの音声信号が出力されます。
裏面の映像/音声入力端子からの信号に切り換えている場合は、VID ボタンを押します。

**S 映像入力1端子または映像入力1 端子からの映像と音声入力1 の左右端子からの音声を出力するには**

ビデオ 1 ボタンを押します。
ビデオ 1 ボタンのランプが点灯し、S映像入力 1 端子または映像入力1 端子の映像と 音声入力 1 の左右端子の音声が出力されます。音声にはマイクの音声がミキシングされて出力されます。

**ご注意**

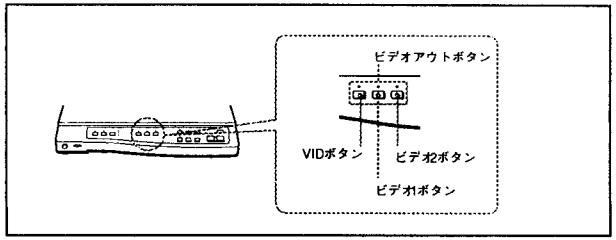
S映像入力 1 端子および映像入力1 端子の両方に信号が入力されている場合は、S映像入力1端子に接続されている信号が優先されて出力されます。

**S 映像入力2端子または映像入力2 端子からの映像と音声入力2 の左右端子からの音声を出力するには**

ビデオ 2 ボタンを押します。
ビデオ 2ボタンのランプが点灯し、S 映像入力 2 端子または 映像入力 2 端子の映像と 音声入力 2 の左 右 端子の音声が出力されます。音声にはマイクの音声がミキシングされて出力されます

**ご注意**

S映像入力 2 端子および映像入力2 端子の両方に信号が入力されている場合は、S映像入力2端子に接続されている信号が優先されて出力されます。




ビデオ入力の切り換え

## 応用操作

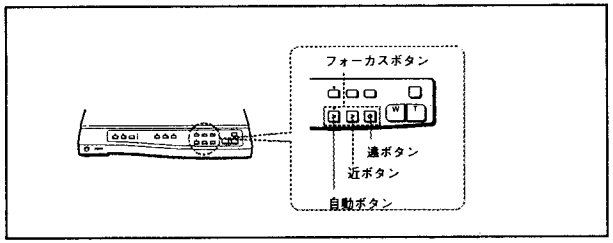
### より好みにあった画像を映す

本機では、電源投入後、被写体を画面の中央に合わせると、フォーカス、絞り、ホワイトバランスが自動的に調整されますが、好みに合わせて手動で調整することもできます。

**フォーカスを調整するには**

操作パネルのフォーカスボタンで調整します。遠ボタンを押すと遠くにピントが合い、近ボタンを押すと近くに合います。次のような場合に、手動でピントを合わせてください。

・明暗の差が少ない資料の場合
・立体物を映す場合




フォーカスの調整

**自動フォーカス調整に戻すには**

自動ボタンを押してランプを点灯させます。



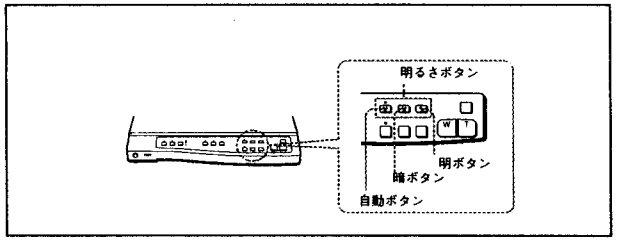


**被写体の明るさを調整する(アイリスの調整)には**

被写体の明るさ(絞り)を調整するには、操作パネルの明るさボタンを使用します。暗ボタンを押すと暗くなり、明ボタンを押すと明るくなります。

次のような場合に、手動で明るさを調整してください。

・被写体が光を反射してしまい、白い部分が多い場合
・資料のコントラストを正確に出したい場合
・ネガの色が薄い場合




明るさを調整する

**明るさの自動調整モードに戻すには**

自動ボタンを押して、ランプを点灯させます。

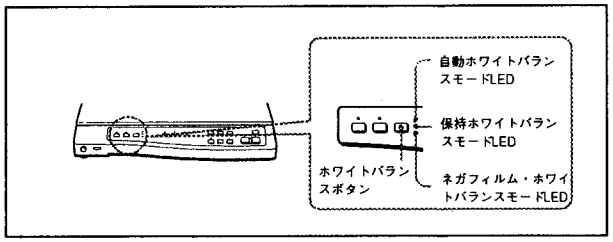
### 色合い(ホワイトバランス)を保持する

本機では、通常自動的にホワイトバランスが調整されますが、保持モードを使用すると、その直前の自動調整で調整された条件のまま、被写体やまわりの照明条件に左右されずに、そのままの色を自然に出せます。

ホワイトバランスの設定モードは、ホワイトバランスボタンを押すたびに、自動→保持→ネガの順で切り換わり、対応するLEDが点灯します。ホワイトバランスを保持するには、ホワイトバランスボタンを押して保持ホワイトバランスモードLEDを点灯させます。ボタンを押す直前の、自動的に調整されていたホワイトバランスが保持されます。

次のような場合に、ホワイトバランスを保持して使用してください。

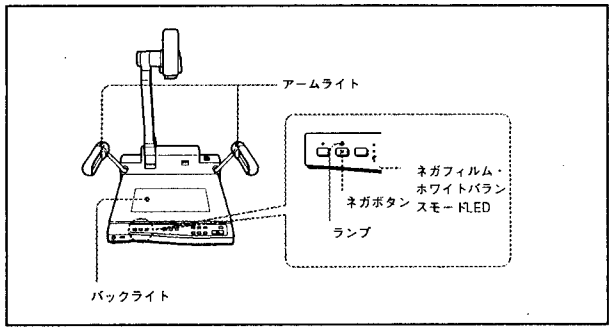
・単一色の被写体や背景を映す場合
・淡い色を自然に出したい場合




色合いを自然に出す

## ネガフィルムを映す

電源投入時に、本機は自動的に通常の資料を映すように設定されています。ネガフィルムを映すには、操作パネルのネガボタンを使用します。ネガボタンを押すと、ランプが点灯してネガフィルム用のモードになったことを示します。アームライトが消えて、ネガフィルムに備えてバックライトが点灯します。ホワイトバランスも自動的にネガフィルム用(3200K )に切り換わり、ネガフィルム・ホワイトバランスモードLED が点灯します。




ネガフィルムを映す

**通常の資料を映すには**

ネガボタンのランプが点灯しているときに、ネガボタンを押します。ホワイトバランスは自動モードに切り換わります。ただし、照明は切り換わりませんので必要に応じて照明ボタンで切り換えてください。

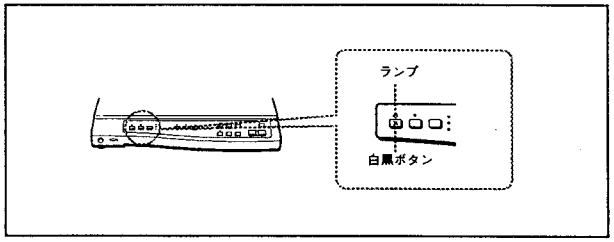




## 画面を白黒にする

画面を白黒にするには、白黒ボタンを押します。ランプが点灯し、画面が白黒モードになったことを表します。次のような場合に、画面を白黒にしてください。

・白黒の文書や白黒フィルムなど、もともと白黒の被写体を映す場合
・カラーの資料を白黒にする場合




画面を白黒表示にする

**ご注意**

新聞の記事などの細かい模様などを写す場合は、画面にちらちら色が出ることがあります。このような場合は、画面を白黒モードに変更するか、モニターをS映像出力端子につないで使用してください。

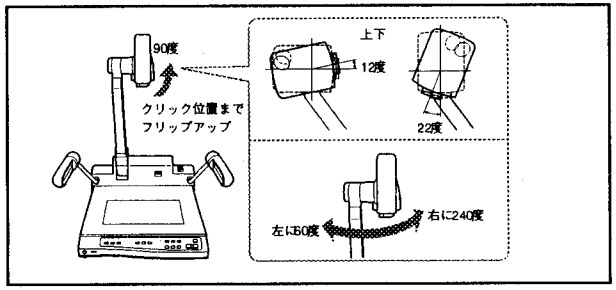
**画面をカラーに戻すには**

白黒ボタンをもう一度押します。ボタンのランプが消え、画面は通常のカラーに戻ります。

## カメラの方向を変える

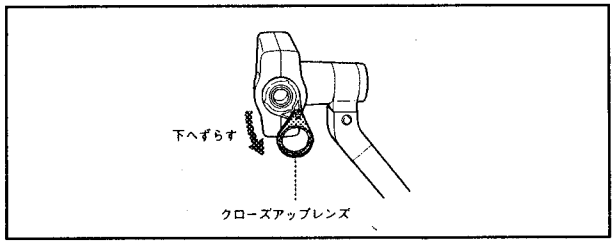
本機のカメラ部は、通常の資料などを映す位置から向きを上に回転させて（フリップアップ）、さらに上下左右に位置を変えて使用できます。生徒や会議の出席者や自分自身を撮影して、モニターやプロジェクターに映し出し、会議の雰囲気などを伝えたりするのに役に立ちます。

なお、遠くを撮る場合は、カメラのクローズアップレンズを外します。




カメラの方向を変える

**クローズアップレンズを外すには**



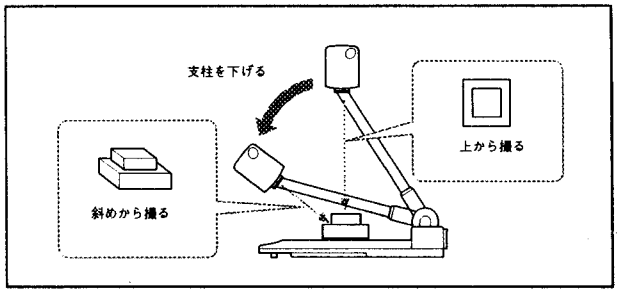

クローズアップレンズを外す





**立体物を映すには**

さらに、立体物を映す場合は、支柱を下げて立体物を斜めから撮ることもできます。

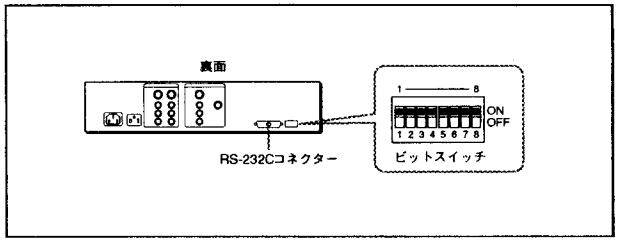



立体物を映す

## 本機を外部から制御する

本機の裏面にあるRS-232C コネクターにコンピューターを接続して、本機を制御することができます。本機を制御するソフトウェアを作成するための通信プロトコル等の詳しい内容については、別冊の「インターフェースマニュアル」をご覧ください。

本機をコンピューターから制御する際には、裏面にあるビットスイッチを必要に応じて設定してください。詳しい内容については、別冊の「インターフェースマニュアル」をご覧ください。



# 主な仕様

| | |
|---|---|
| カラー方式 | NTSC 方式 |
| 撮像素子 | 1/3インチインターライン転送方式CD |
| 解像度 | 水平: 420TV本 |
| 有効画素数 | 38万画素、768 × 494（水平 ×垂直） |
| 撮影領域 | 最大 310× 235 mm、最小 34× 25.5 mm |
| レンズ | 10 倍ズームレンズ f = 6.2～62 mm |
| | 口径比 F1.6～2.9 |
| ズーム | 電動 |
| フォーカス | 自動／手動切り換え |
| アイリス | 自動／手動切り換え |
| ホワイトバランス | 自動／手動切り換え |
| ポジフィルム/ネガフィルム切り換え機能 | |
| | 内蔵 |
| 白黒／カラー選択機能 | 内蔵 |
| 出力選択 | 3系統(VID/ビデオ1/ビデオ2) |
| 照明 | アームライト: 9W ツインタイプ蛍光灯×2 |
| | バックライト: 8W 蛍光灯×2 |
| 入力 | 映像入力(ピンジャック)(2) |
| | 1 Vp-p、75Ω、同期負 |
| | S映像入力(4ピンミニジャック)(2) |
| | Y: 1 Vp-p、75Ω、同期負 |
| | C: 0.286Vp-p、75Ω |
| | 音声入力(ピンジャック)(2) |
| | 入力インピーダンス 47kΩ |
| | レベル: −10 dB、不平衡 |
| | MIC(標準ジャック)(1) |
| | 入力インピーダンス 3.3kΩ |
| | レベル: −60 dB、不平衡 |
| 出力 | 映像出力(ピンジャック)(1) |
| | 1 Vp-p、75Ω、同期負 |
| | 映像出力(BNC端子)(1) |
| | 1 Vp-p、75Ω、同期負 |
| | S映像出力(4ピンミニジャック)(1) |
| | Y: 1 Vp-p、75Ω、同期負 |
| | C: 0.286 Vp-p、75Ω |
| | 音声出力(ピンジャック)(1) |
| | 出力インピーダンス 600Ω以下 |
| | レベル: −10 dB、不平衡 |
| | 電源出力(補助電源コンセント) |
| | 非連動、最大 300W |
| RS-232C コネクター | D-Sub 25ピン |
| 電源 | AC100V 、50/60Hz |
| 消費電力 | 30W |
| 寸法 | 約446×190×720mm(幅/高さ/奥行き)(折り畳み時) |
| | 約572×684×620 mm(幅/高さ/奥行き) |
| 質量 | 約 7.8kg |
| 付属品 | AC 電源コード(1) |
| | 取扱説明書(1) |
| | インターフェースマニュアル(1) |
| | 保証書(1) |

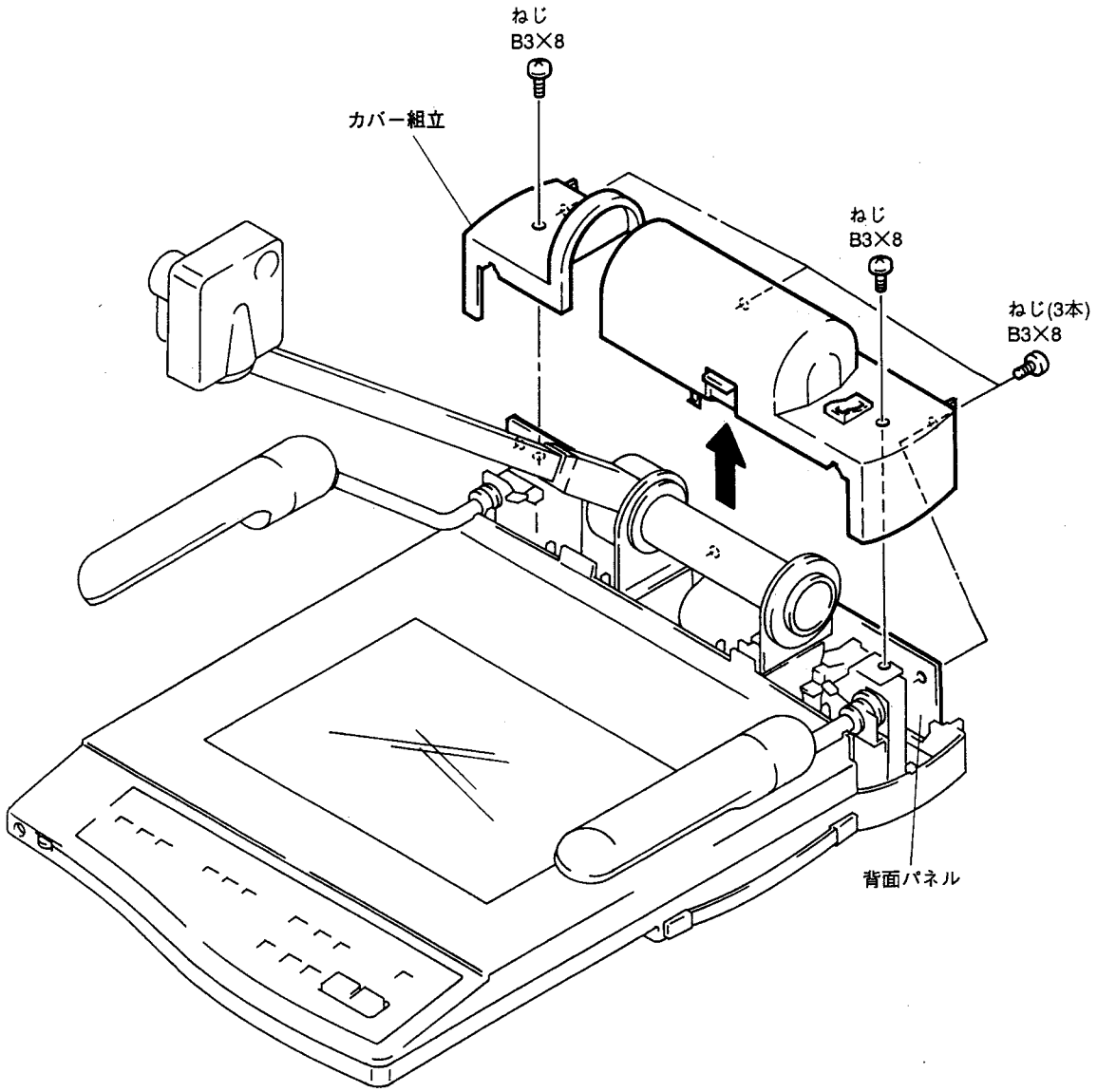
本機の仕様および外観は、改良のため予告なく変更することがありますがご了承ください。

# 第2章
# サービスインフォメーション

## 2-1. 主要部品の取り外し方法

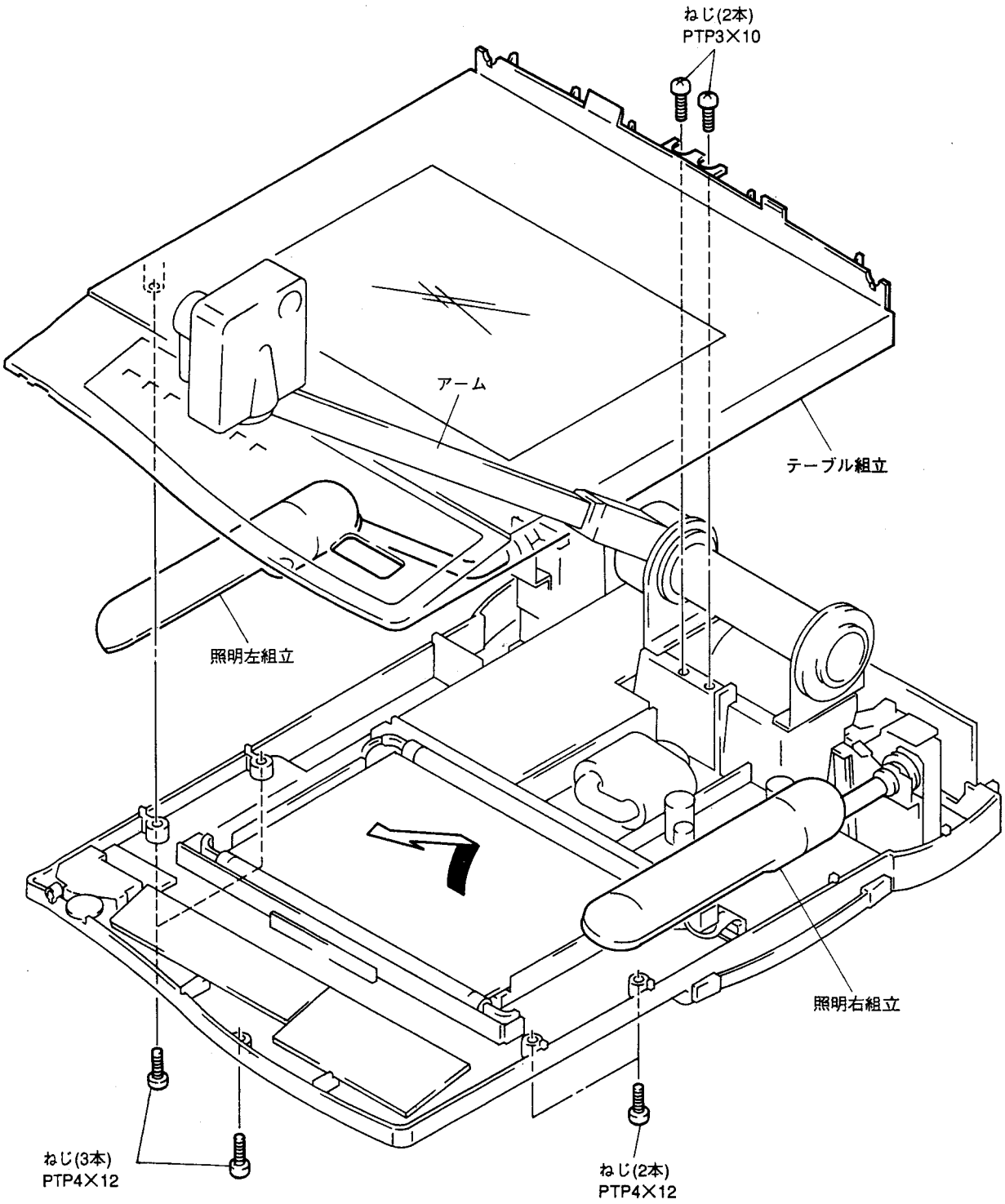
### 2-1-1. カバー組立の外し方

1. ねじ (B3×8) 2本を外す。
2. 背面パネル側のねじ (B3×8) 3本を外し，カバー組立を矢印方向に取り外す。



## 2-1-2. テーブル組立の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. 図に示すねじ (PTP4×12) 5本を外す。
3. テーブル組立を止めているねじ (PTP3×10) 2本を外す。
4. 照明左/右組立およびアームを図の示す位置まで移動する。
5. 矢印に沿って斜め上方向にテーブル組立を取り外す。

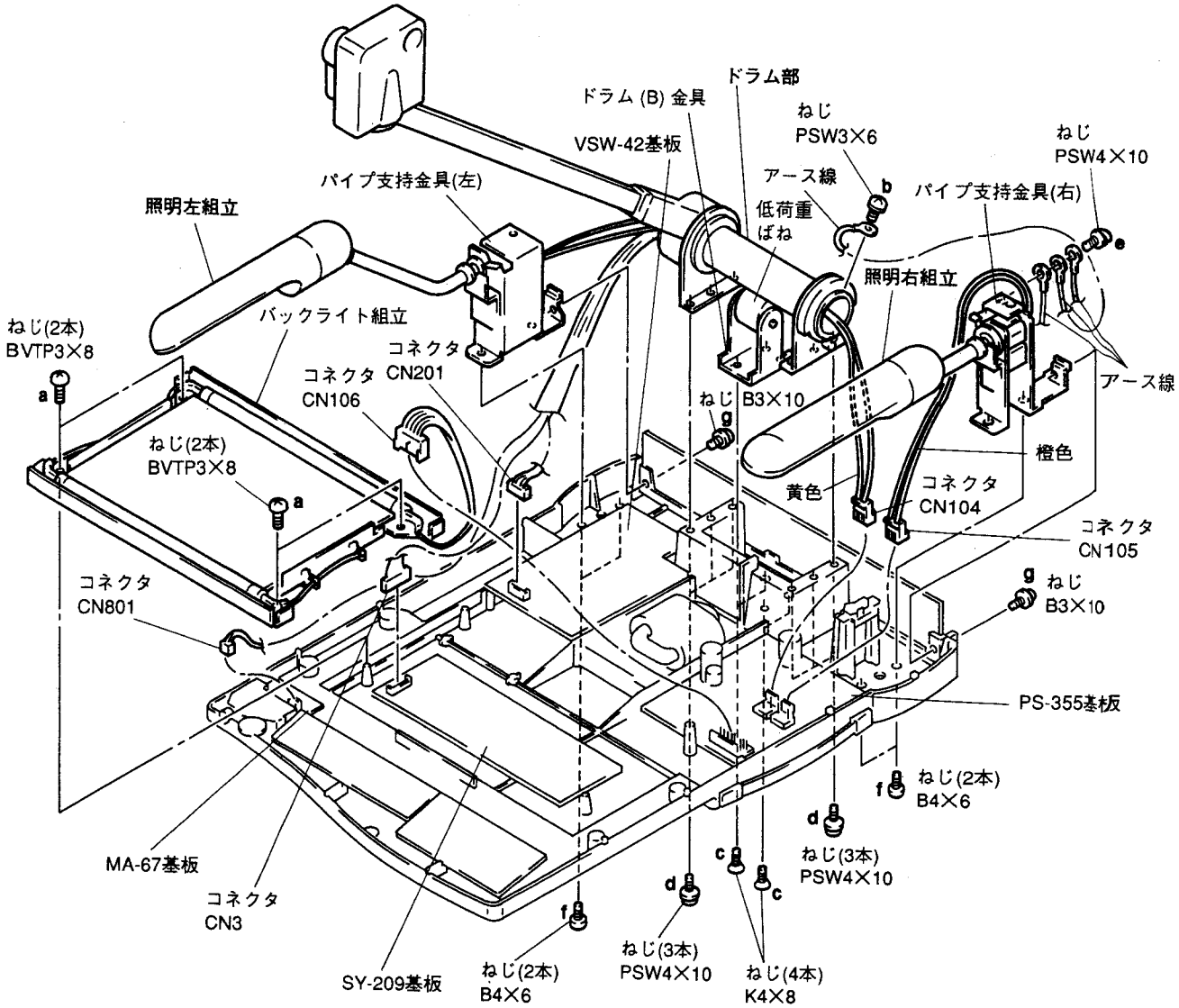


### 2-1-3. ドラム部の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. PS-355基板のコネクタ (CN106) 1個とねじ a (BVTP3×8) 4本を外し, バックライト組立を取り外す。
4. PS-355基板からコネクタ (CN104) を引き抜く。
5. MA-67基板からコネクタ (CN801) を引き抜く。
6. SY-209基板からコネクタ (CN3) を引き抜く。
7. VSW-42基板からコネクタ (CN201) を引き抜く。
8. ねじ b (PSW3×6) を外し, アース線をドラム部から取り外す。
9. ドラム (B) 金具の取り付けねじ c (K4×8) 4本を低荷重ばねがはねないよう手で押さえながら外す。
10. シャーシ底から止めているねじ d (PSW4×10) 6本を外し, ドラム部を取り外す。

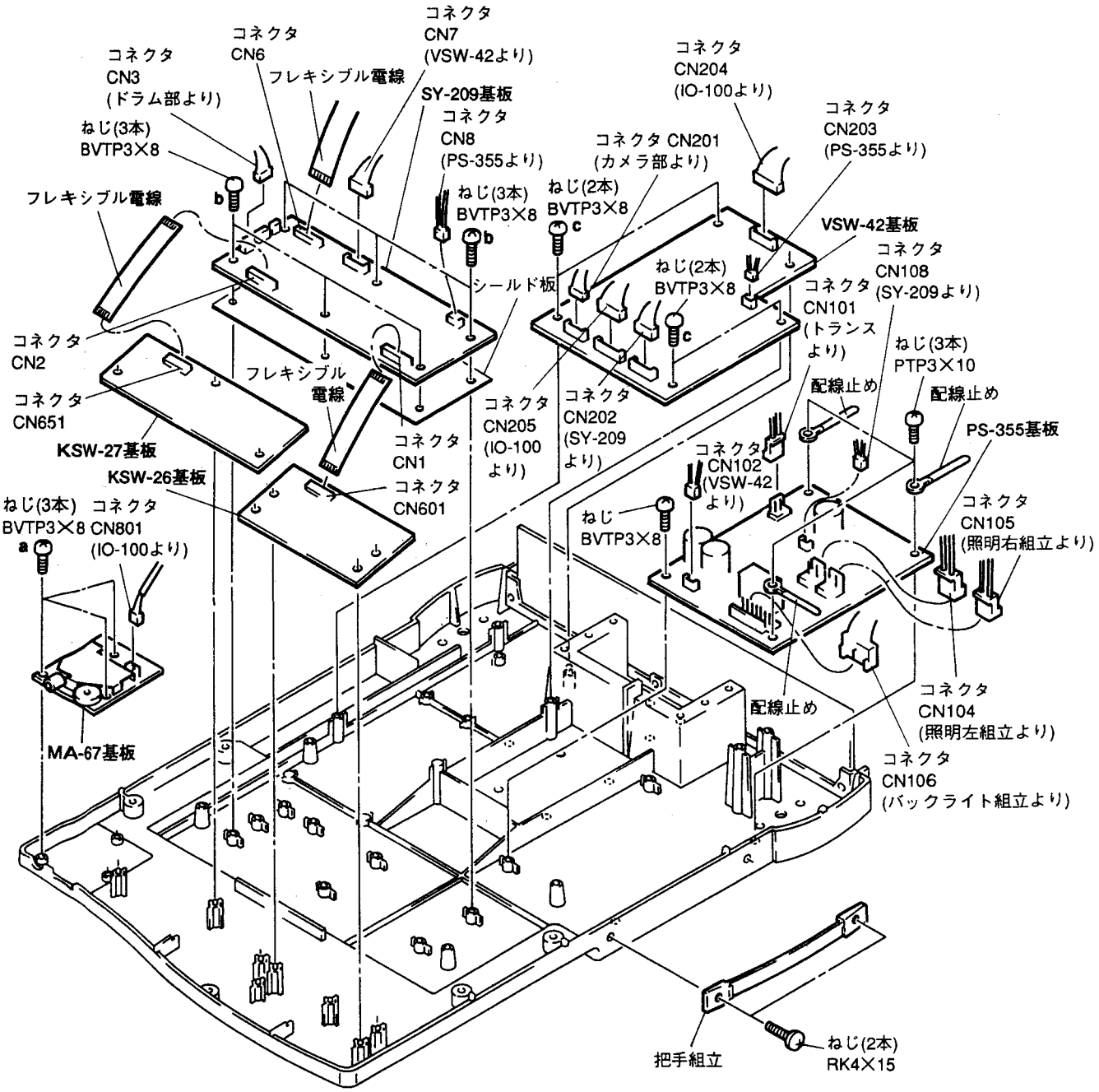
### 2-1-4. 照明左/右組立の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. PS-355基板からコネクタ (CN104, CN105) 2個を引き抜く。
4. ねじ e (PSW4×10) を外し, 照明右組立からアース線3本を取り外す。
5. パイプ支持金具 (左) / (右) を止めているねじ f (B4×6) 各2本およびねじ g (B3×10) 各1本を外し, 照明左/右組立を取り外す。



• ここに示す図は, 次の項目に適用する。

2-1-5. KSW-26/27基板の外し方
2-1-6. MA-67基板の外し方
2-1-7. SY-209基板の外し方
2-1-8. PS-355基板の外し方
2-1-9. VSW-42基板の外し方



### 2-1-5. KSW-26/27基板の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. コネクタ (CN601) からフレキシブル電線を外し, KSW-26基板を取り外す。
4. パイプ支持金具 (右) へ行っているアース線を外す。
5. コネクタ (CN651) からフレキシブル電線を外し, KSW-27基板を取り外す。

### 2-1-6. MA-67基板の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. MA-67基板からコネクタ (CN801) を引き抜く。
4. ねじ a (BVTP3×8) 3本を外し, MA-67基板を取り外す。

### 2-1-7. SY-209基板の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. バックライト組立を取り外す。(3-3項参照)
4. SY-209基板からコネクタ3個 (CN3, CN7, CN8) とフレキシブル電線3個 (CN1, CN2, CN6) を引き抜く。
5. ねじ b (BVTP3×8) 6本を外し, SY-209基板を取り外す。(シールド板も同時に外す。)

### 2-1-8. PS-355基板の外し方

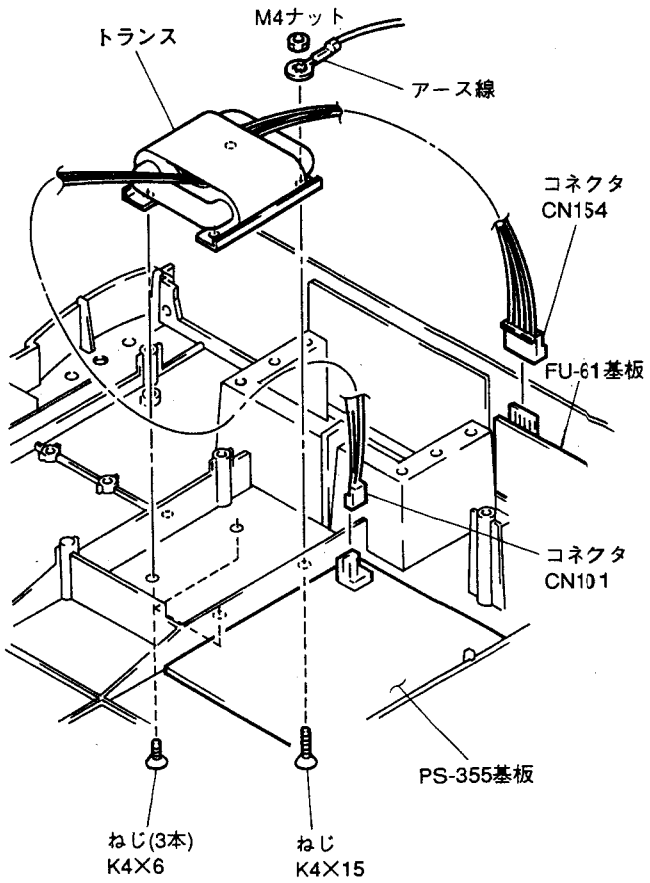
1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. PS-355基板からコネクタ (CN101, CN102, CN104, CN105, CN106, CN108) 6個を引き抜く。
4. ねじ (PTP3×10) 3本, (BVTP3×8) 1本を外し, 配線止め (3個) およびPS-355基板を取り外す。

### 2-1-9. VSW-42基板の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. VSW-42基板からコネクタ (CN201からCN205) 5個を引き抜く。
4. ねじ c (BVTP3×8) 4本を外し, VSW-42基板を取り外す。
5. カメラからのアース線 (半田付け) を外す。

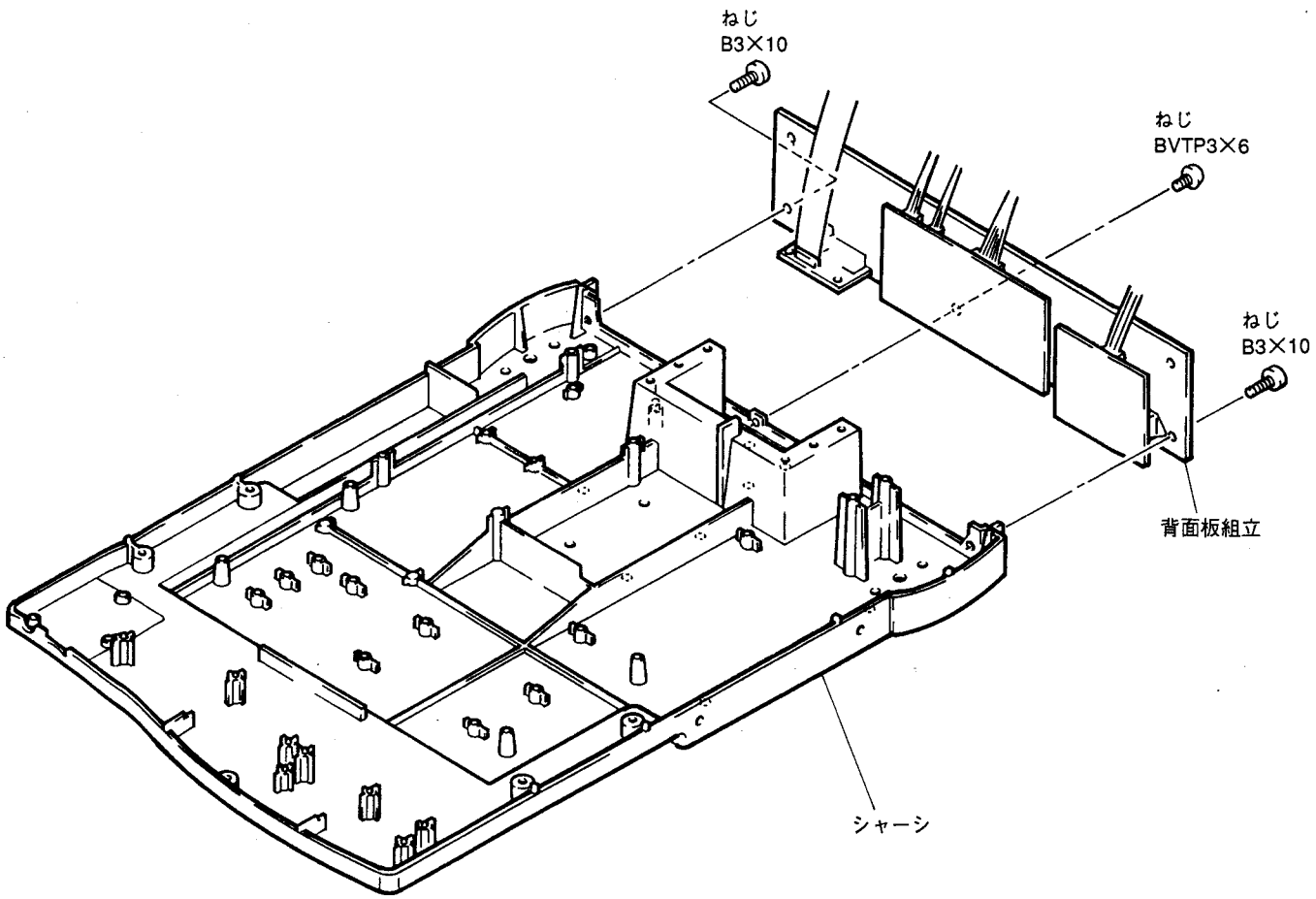
### 2-1-10. トランスの外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. FU-61基板からコネクタ (CN154) を引き抜く。
4. ナット (M4) とねじ (K4×15) を外し, アース線を取り外す。
5. PS-355基板からコネクタ (CN101) を引き抜く。
6. ねじ (K4×6) 3本を外し, トランスを取り外す。



2-1-11. シャーシの外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. 2-1-3項から2-1-10項を行ってシャーシを外す。

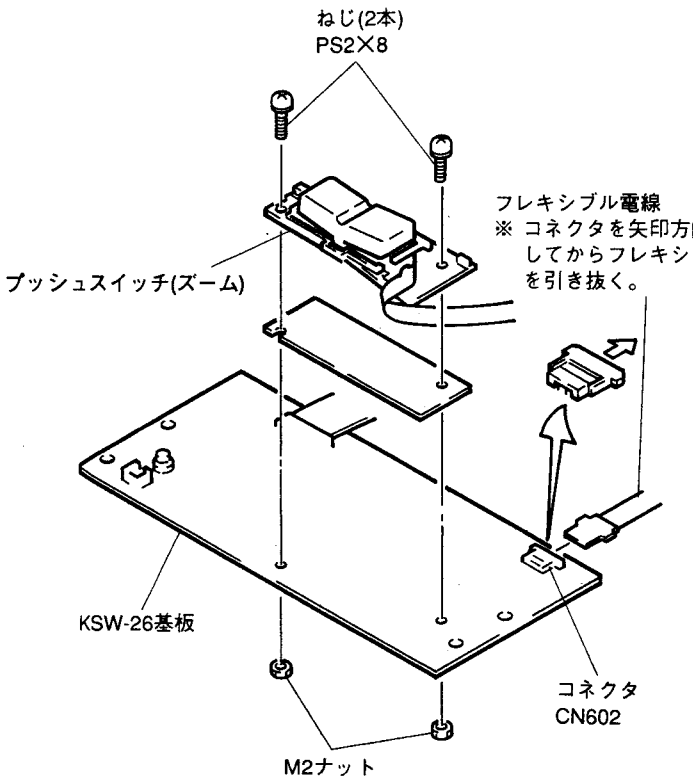


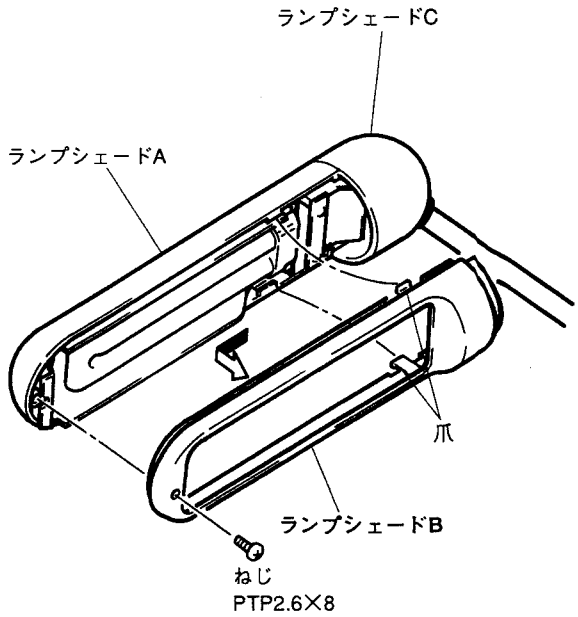
## 2-1-12. プッシュスイッチ (ズーム) の外し方

1. カバー組立を取り外す。(2-1-1項参照)
2. テーブル組立を取り外す。(2-1-2項参照)
3. KSW-26基板のコネクタ (CN602) からフレキシブル電線を引き抜く。
4. ねじ (PS2×8) 2本を外し, プッシュスイッチ (ズーム) を取り外す。

## 2-1-13. ランプシェードBの外し方

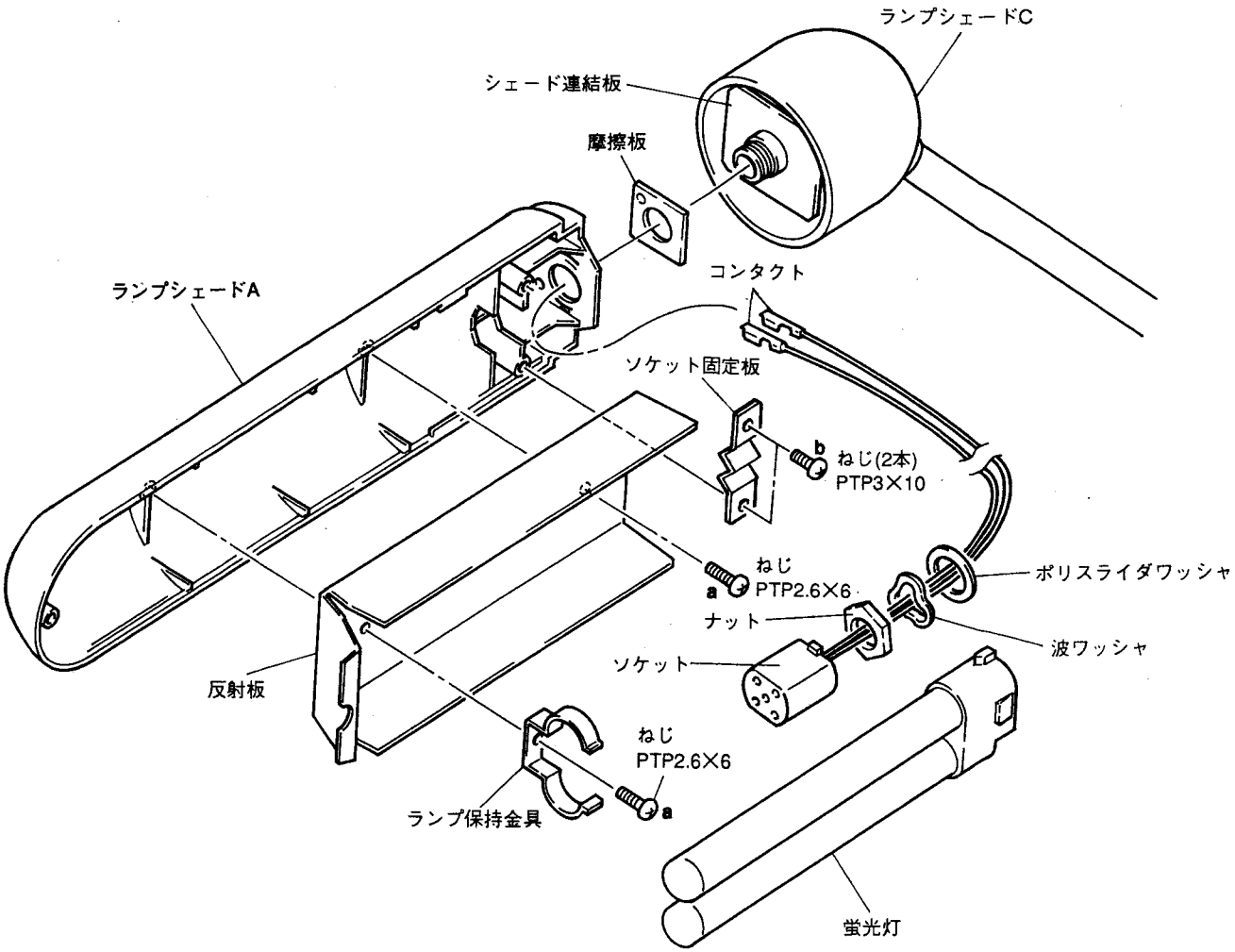
1. ねじ (PTP2.6×8) を外す。
2. ランプシェードBを矢印方向へずらし, 爪部のロックを外しながら取り外す。



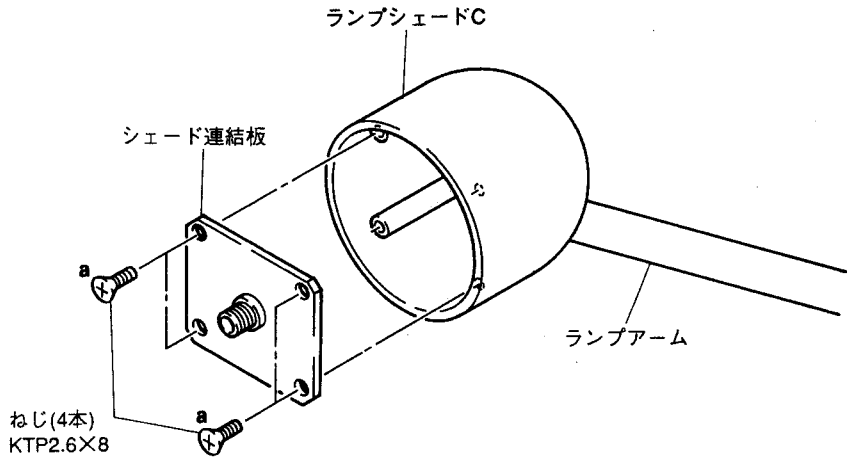
## 2-1-14. ランプシェードAの外し方

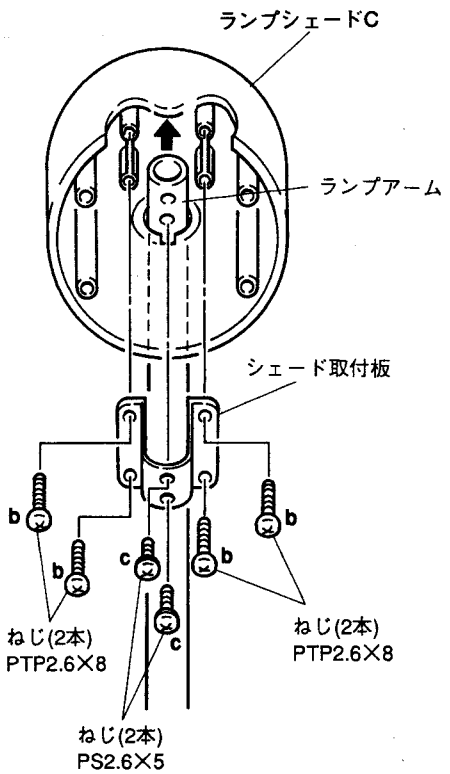
1. ランプシェードBを取り外す。(2-1-13項参照)
2. PS-355基板からコネクタ (CN105) を外し, コネクタハウジングからコンタクト2本を抜く。
3. 蛍光灯をソケットから抜く。
4. ねじ a (PTP2.6×6) 2本を外し, ランプ保持金具および反射板を取り外す。
5. ねじ b (PTP3×10) 2本を外し, ソケット固定板を取り外す。
6. ソケットを引き抜く。
7. ナット, 波ワッシャ, ポリスライダーワッシャおよび摩擦板を外し, ランプシェードAを取り外す。

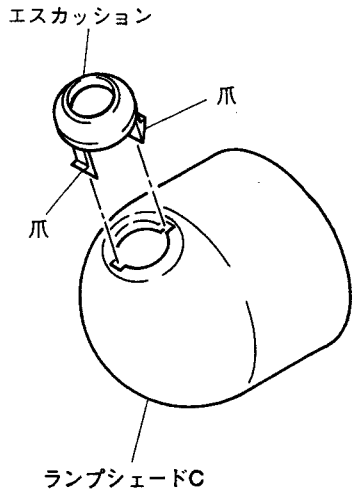


2-1-15. ランプシェードCの外し方

1. ランプシェードBを取り外す。(2-1-13項参照)
2. ランプシェードAを取り外す。(2-1-14項参照)
3. ねじ a (KTP2.6×8) 4本を外し, シェード連結板組立を取り外す。
4. ねじ b (PTP2.6×8) 4本を外し, ランプアームを矢印方向に少し, 押し込む。
5. ねじ c (PS2.6×5) 2本を外し, シェード取付板を取り外した後, ランプアームを引き抜く。
6. エスカッションの爪 (2箇所) を外し, ランプシェードCを外す。

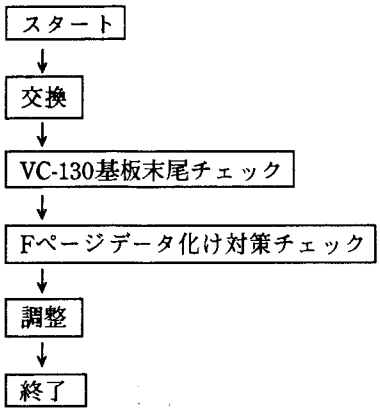


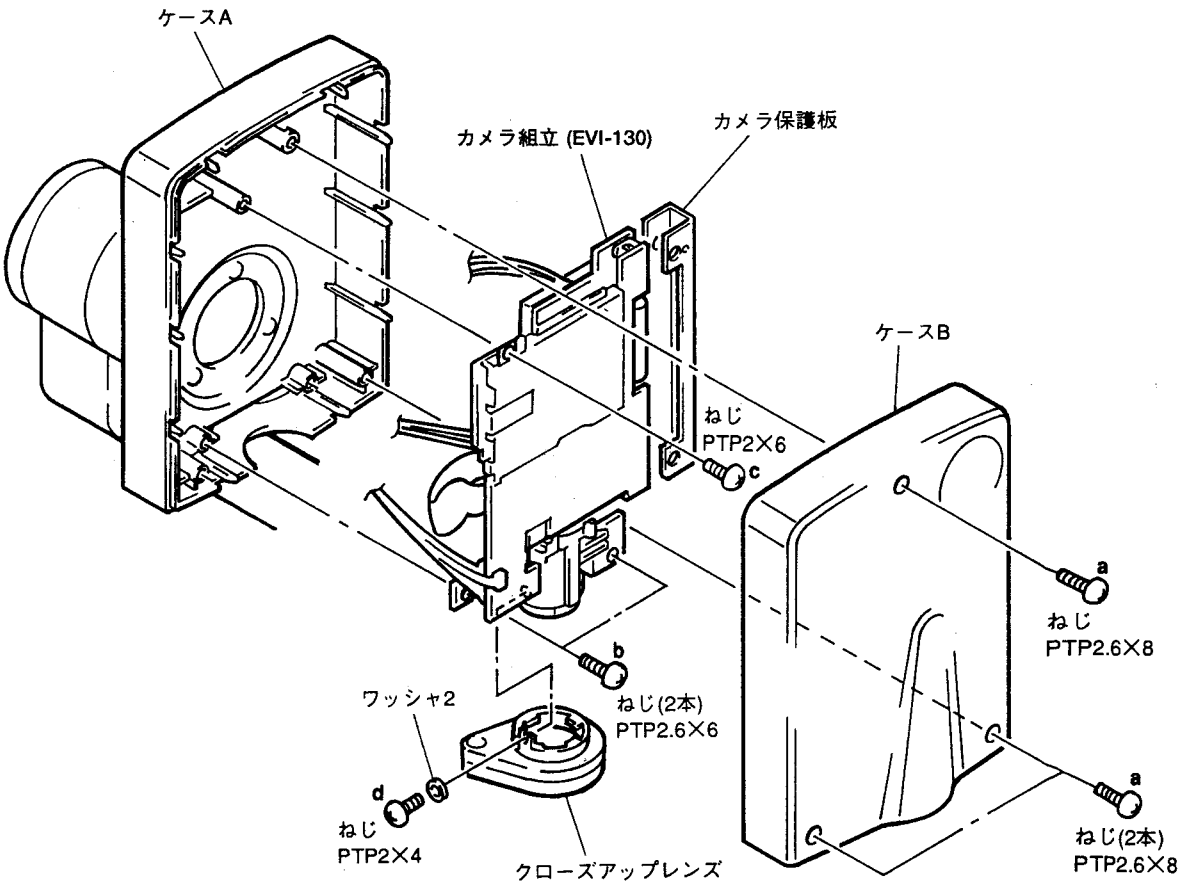
## 2-1-16. カメラ組立の交換方法

カメラ組立 (EVI-130) を交換した際は, データの書き換えが必要です。
主な作業手順をフローチャートで示します。




「外し方」

1. ねじ a (PTP2.6×8) 3本を外し, カメラケース (B) を取り外す。
2. ねじ b (PTP2.6×6) 2本とねじ c (PTP2×6) 1本を外し, カメラ組立を取り外す。
3. カメラ保護板を外す。
4. カメラ組立からコネクタ5個を外す。(CN231, CN601, CN922, CN927, CN928)
5. ねじ d (PTP2×4) とワッシャ2を外し, クローズアップレンズを取り外す。

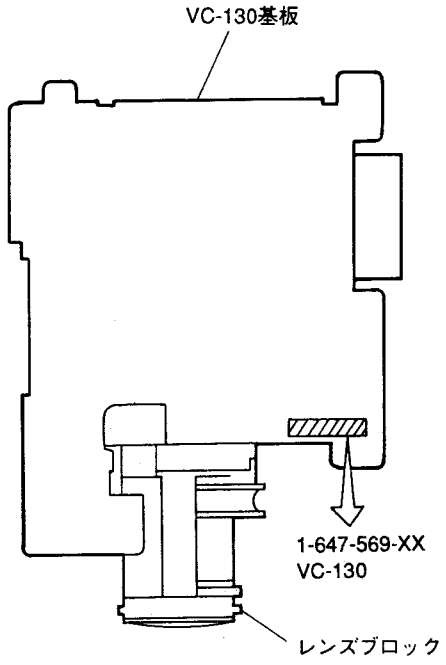


「チェック」

6. 図に示すVC-130基板の末尾チェックを行う。

カメラ組立 (EVI-130) は, VC-130基板の末尾によってE-PROMのライトプロテクト解除の方法が異なる。

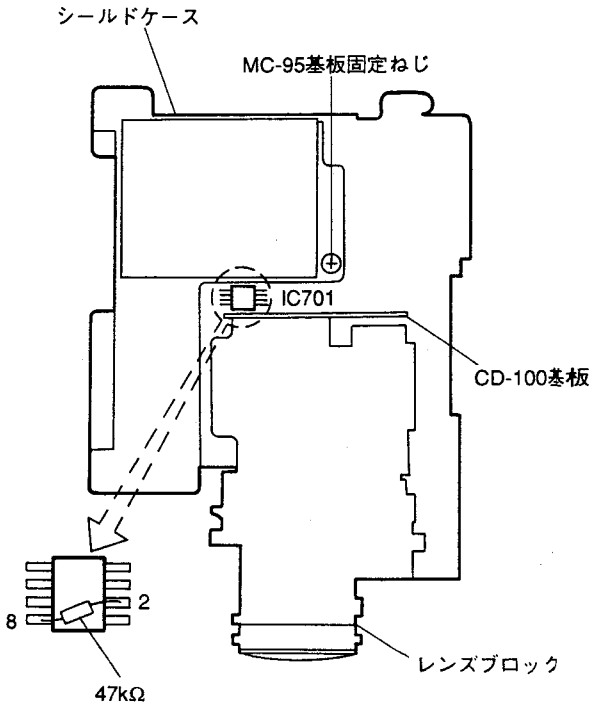
「基板末尾」
-11 : ライトプロテクト解除SW無し
-12 : ライトプロテクト解除SW有り




7. Fページデータ化け対策のチェックを行う。

このチェックはVC-130基板の末尾-11のみに適用される。
基板末尾-12ではこのチェックが不要です。

「チェック方法」
図に示すIC701の2ピン, 8ピン間に抵抗 (47 kΩ) が付いていることを確認する。

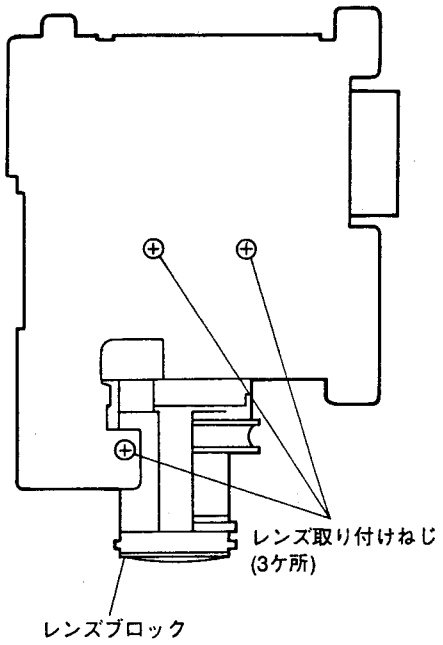



対策が行われていないときは, 次の手順で抵抗 (47 kΩ) を取り付ける。

「取り付け手順」
1) 図に示すMC-95基板の固定ねじを外す。

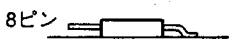
2) 取り付けねじ (3本) を外し, レンズブロックを取り外す。

**注意**：ねじの取り外しは, レンズブロックを手に持って行い基板にストレスをかけないようにすること。




3) コネクタ (CN801) を引き抜く。

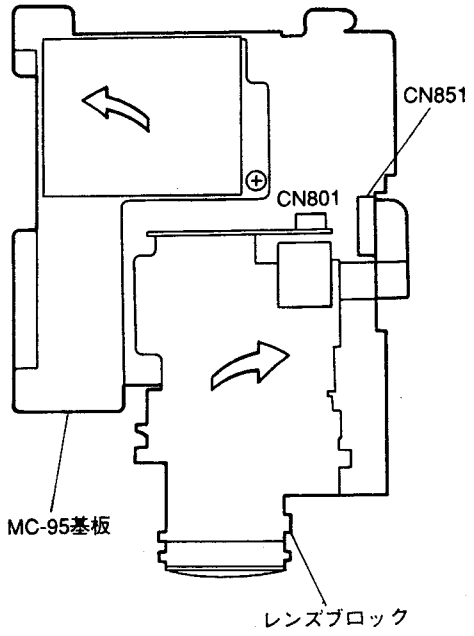
4) 図に示すIC701の8ピンをパターンより取り外す。

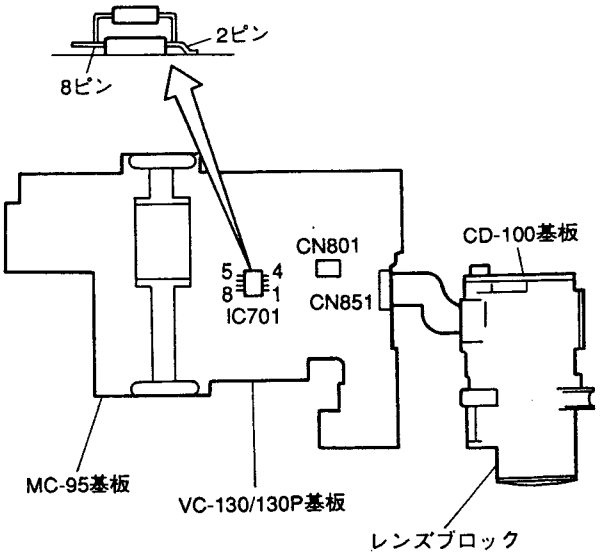



5) IC701の8番ピン, 2番ピン間に抵抗 (47 kΩ /1-249-437-11) を半田付けする。

6) 抵抗 (47 kΩ) を取り付けた後, コネクタ (CN801) を差し込み, レンズブロック取り付ける。

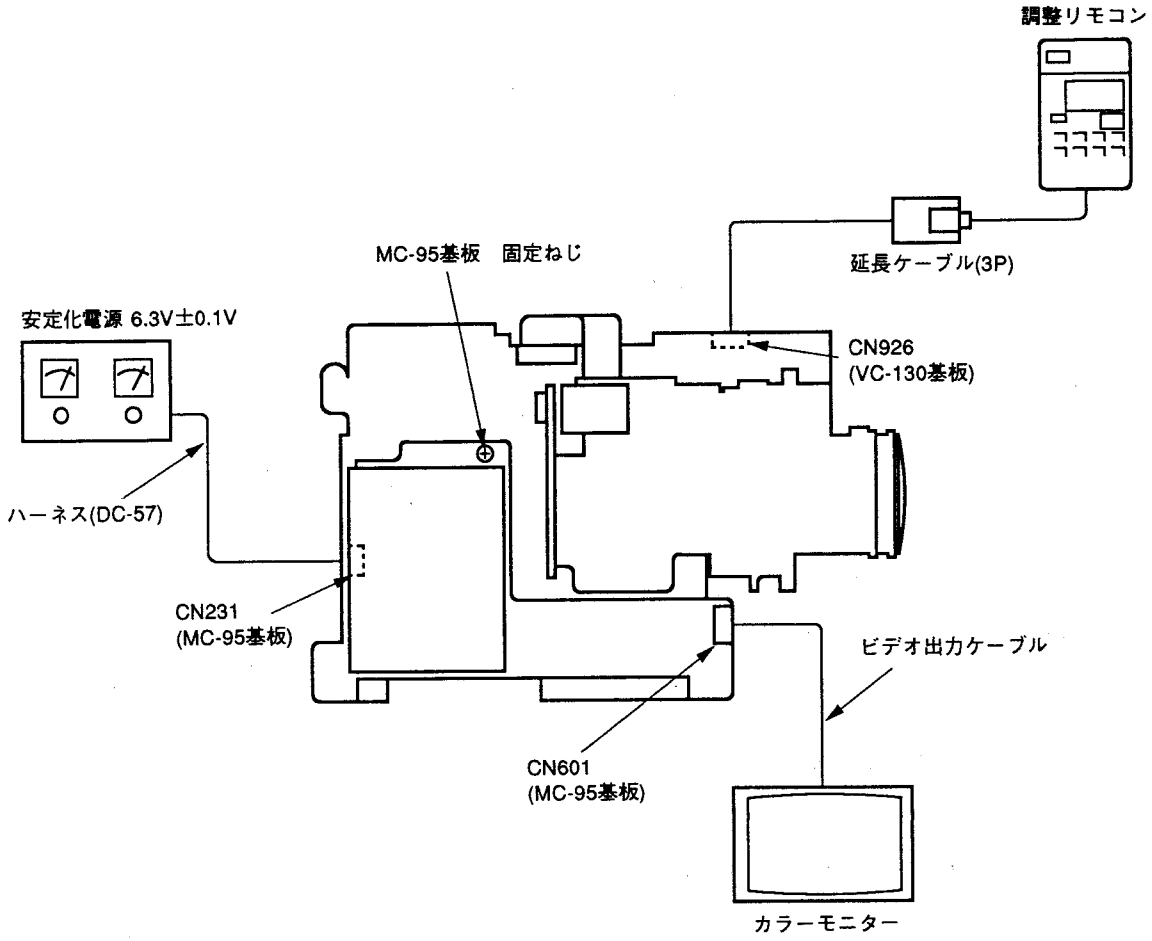
7) MC-95基板の固定ねじを取り付ける。

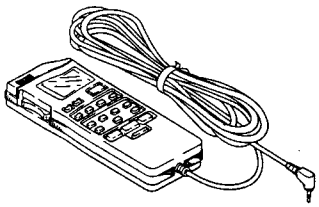


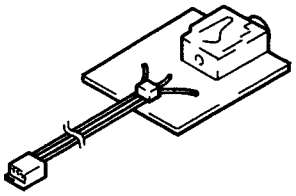
## 8. カメラ組立接続図

ここでは, カメラ組立の接続およびチェック/調整に使用する治具の紹介をします。

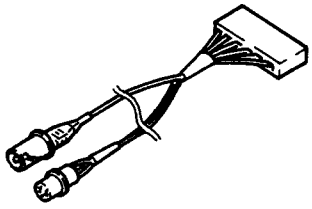


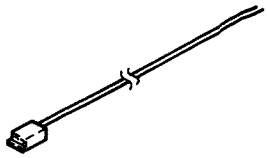
調整リモコン
(J-6082-053-B)



延長ケーブル (3P)
(J-6082-291-A)



ビデオ出力ケーブル
(J-6082-293-A)



ハーネス(DC-57)
(1-951-473-11)

9. 調整リモコン

カメラ部の調整はデジタル信号処理の演算の係数や定数を変えること，またはEVR IC (VC-130基板 IC705) の出力電圧を変化させることによって実現しています。これらの制御はカメラマイコン (VC-130基板 IC702) が行っています。このマイコンは不揮発性メモリ (VC-130基板 IC701 : EEPROM) に書き込まれたデータを読み出し，デジタル信号処理回路やEVRへ送信しています。

したがって，調整を行うためには，不揮発性メモリに書き込まれている調整データを書き換える必要があり，このために，調整リモコンが使用されます。

調整リモコンは，リモコン信号線 (ECCP) を使ってカメラ部マイコンと双方向通信を行います。調整リモコンからカメラマイコンへは，ページ，アドレスおよびデータのアップ/ダウンコマンドが送信されます。カメラ部マイコンから調整リモコンへは，ページ，アドレスおよびデータが送信されます。

「調整リモコンの使用方法」

1) リモート端子 (VC-130基板 CN926) に調整リモコンを接続する。
2) 調整リモコンのHOLDスイッチをHOLD (SERVICE位置) にする。
   接続が正常ならば調整リモコンのLCD上に図9-1.のような表示がされます。

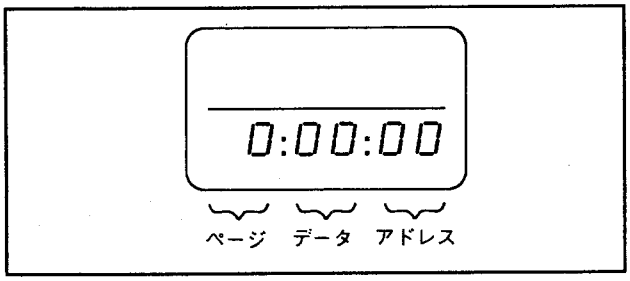



図9-1.

3) 調整リモコンは次のように操作します。
   - ページの変更
     EDIT SEARCH+ボタンを押すとページは増加します。EDIT SEARCH−ボタンを押すとページは減少します。ページは0〜Fの16のページがあります。

| 16進数 | 0 1 2 3 4 5 6 7 8 9 A B C D E F |
|---|---|
| LCD上の表示 | 0 1 2 3 4 5 6 7 8 9 A b c d E F |
| 10進数換算値 | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |

表9-1.

   - アドレスの変更
     FF (►►) ボタンを押すと，アドレスは増加します。
     REW (◄◄) ボタンを押すとアドレスは減少します。
     アドレスは00〜FFの256のアドレスがあります。
     ただし，調整で使用しないアドレスは一部表示しません。
   - データの変更 (データのセット)
     PLAY (►) ボタンを押すと，データは増加します。
     STOP (■) ボタンを押すとデータは減少します。データは00〜FFの256の値があります。
   - 調整データの書き込み
     調整データ (Fページ，Eページ，Dページ) を不揮発性メモリに書き込むためにはPAUSEボタンを押す必要があります。
     (この操作を行わない場合，新しい調整データは不揮発性メモリに記憶されません。)

「調整リモコン使用上の注意」

調整リモコンの操作ミスによって，正しい調整データを消去してしまう場合が考えられます。これを防止するため調整を行う前に全調整データをメモしておくこと，および一項目の調整が終了するたびに新しい調整データをメモしておくことをお勧めします。

「調整」

10. マイコンのROMバージョンチェックを行う。
1) 調整リモコンでページ:6, アドレス:11 (H) のときのデータが次の規格を満足することを確認する。

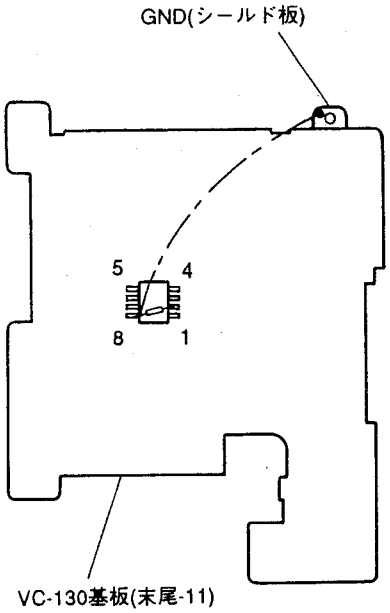
規格 : 10 (H) 以上あること
(10 (H) 以下のものは使用不能)

11. ライトプロテクトの解除を行う。

「VC-130基板末尾-11のとき」

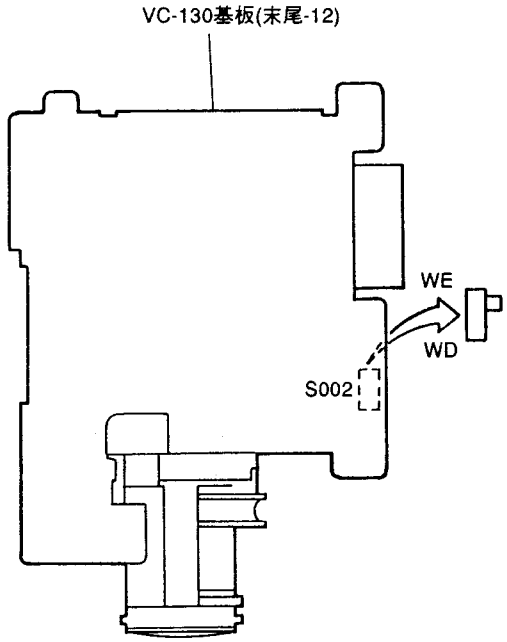
1) MC-95基板を固定しているねじを外し, MC-95基板を開く。
2) 電源をONにする。
3) IC701の8番ピンをワニグチクリップ等でGND (シールド板) に接続する。

注意1 : 誤動作を防ぐため, GND側を先に接続する。
注意2 : 抵抗やICの足にストレスがかからないように注意する。




「VC-130基板末尾-12のとき」

1) 電源をONする。
2) VC-130基板のスイッチ (S002) をWE側にする。



12. ライトプロテクトの解除を行う。
1) 調整リモコンでページ：6, アドレス：00 (H) のときのデータを10 (H) から01 (H) に変更する。

13. AEレファレンスレベルの設定変更を行う。
1) 調整リモコンでページ：F (H) , アドレス：62 (H) のときのデータを16 (H) から20 (H) に変更する。
2) 調整リモコンのPAUSEボタンを押す。

14. フォーカスリミッタの設定変更を行う。
1) 調整リモコンでページ：F (H) , アドレス：69 (H) のときのデータを05 (H) から03 (H) に変更する。
2) 調整リモコンのPAUSEボタンを押す。

15. ライトプロテクトSWの設定を行う。

「VC-130基板末尾-11のとき」

1) スッテプ11で接続したワニグチクリップを取り外す。
2) 電源をOFFにする。

注意：ワニグチクリップは, 必ずIC701側から外す。

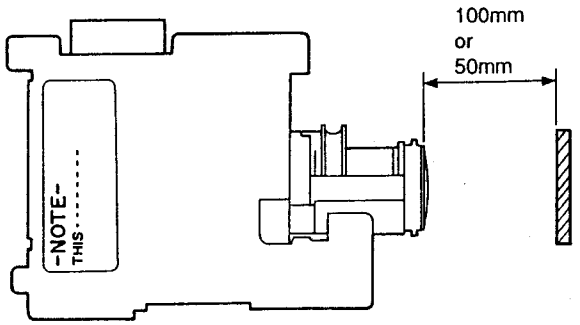
「VC-130基板末尾-12のとき」

1) ステップ11で切り替えたVC-130基板のスイッチ (S002) の位置をWD側に戻す。
2) 電源をOFFにする。

注意：カメラの調整モードを解除するため, 必ず電源をOFFにする。

16. フォーカスリミッタの設定変更のチェックを行う。
1) 調整リモコンのHOLDスイッチをNO側にする。
2) ズームレンズのWIDE側をカラーモニタの画面がワイド側一杯になるまで押し続ける。
3) レンズ先端から100mmの位置に文字等の書いてある被写体を置き, 焦点が合うことを確認する。
4) レンズ先端から50mmの位置に被写体を置き, 焦点が合わないことを確認する。

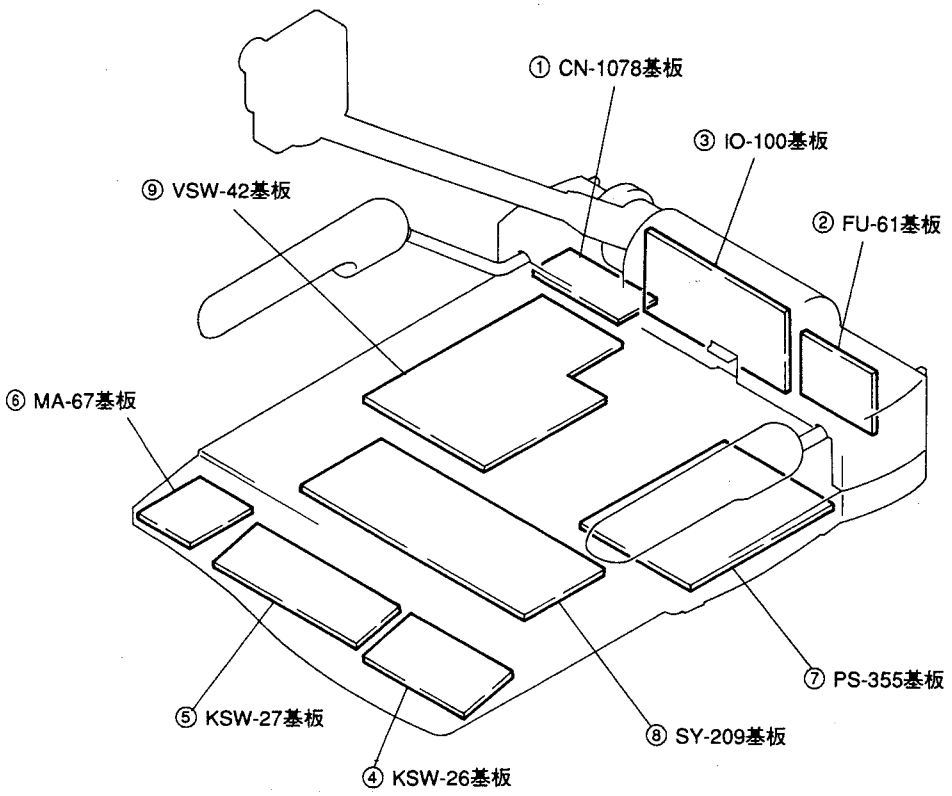
注意：クローズアップレンズなどが付いていない状態で確認を行う。




17. 注意ラベルを張り付ける。
調整が完了したらカメラの内部設定が変更されていることを示す注意ラベルを張り付ける。
(ソニー部品番号：3-187-332-01)

- NOTE -
THIS CAMERA WAS CHANGED ITS SETTING FROM INITIAL CONDITION.
CF. VID-P100 SERVICE MANUAL.

## 2-2. 基板配置図




## 2-3. 各基板の機能名称の一覧表

| 基板 | 機能概要 |
|---|---|
| CN-1078 | コネクタ基板 |
| FU-61 | ヒューズ基板 |
| IO-100 | 入出力基板 |
| KSW-26 | キースイッチ基板 |
| KSW-27 | キースイッチ基板 |
| MA-67 | マイクアンプ基板 |
| PS-355 | 電源基板 |
| SY-209 | シスコン基板 |
| VSW-42 | ビデオ基板 |

## 2-4. 接続コネクタおよび入出力信号 (VIDEO, AUDIO)

### コネクタの入出力信号

入力

Sビデオ　：4ピンミニDIN×2
　Y：1.0 Vp-p, 75Ω, 同期負
　C：0.286 Vp-p, 75Ω

コンポジットビデオ：RCAピン×2
　1.0 Vp-p, 同期負

オーディオ　：RCAピン×2 (ステレオ)
　入力インピーダンス　47 kΩ
　入力レベル　−10 dB, 不平衡

マイク入力　：標準ジャック×1
　入力インピーダンス　3.3 kΩ, (600Ωマイクロホンに適合)
　入力レベル　−60 dB, 不平衡

出力

Sビデオ　：4ピンミニDIN×1
　Y：1.0 Vp-p, 75Ω, 同期負
　C：0.286 Vp-p, 75Ω

コンポジットビデオ：RCAピン×1
　1.0 Vp-p, 同期負
　BNCピン×1
　1.0 Vp-p, 同期負

オーディオ　：RCAピン×1 (ステレオ)
　出力インピーダンス　47 kΩ
　出力レベル　−10 dB, 不平衡

電源入力×1　J　100V AC　50/60 Hz

ACアウトレット×1 (J, U仕向のみ) 非連動, 最大300W

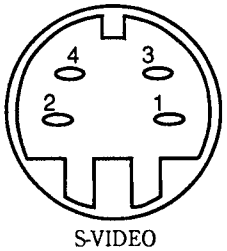
### 接続コネクタ

| VID-P100 使用先 | 適合コネクタ/ケーブル 名称 | ソニー部品番号 |
|---|---|---|
| S VIDEO INPUT | YC-1.5V (1.5m) | 別売りアクセサリー |
| COMPOSITE VIDEO INPUT | PLUG, PHONO | 1-506-138-11 |
| AUDIO INPUT | PLUG, PHONO | 1-506-138-11 |
| MIC INPUT | STANDARD PLUG | 1-506-360-11 |
| S VIDEO OUTPUT | YC-15V (1.5m) | 別売りアクセサリー |
| COMPOSITE VIDEO OUTPUT | PLUG, PHONO | 1-506-138-11 |
| | BNC, MALE | 1-560-069-11 |
| AUDIO OUTPUT | PLUG, PHONO | 1-506-138-11 |

S-VIDEO

| ピンNo. | 入/出力信号 |
|---|---|
| 1 | Y (G) |
| 2 | C (G) |
| 3 | Y (X) |
| 4 | C (X) |

<external view>




S-VIDEO

## 2-5. 補修用部品注意事項

### 2-5-1. 補修用部品注意事項

1. 安全重要部品
   回路図, 分解図, 電気部品表中, ⚠印付きの部品は, 安全性を維持するために重要な部品です。従って, これらの部品を交換するには必ず指定の部品と交換すること。

2. 部品の共通化
   ソニーから供給される部品はセットに実装されているものと異なることがある。これは部品の共通化, 改良等によるものである。分解図や電気部品表中には現時点での共通化された部品が記載されている。

3. 部品在庫
   部品表のSP (Supply code) 欄にoで示されている部品は交換頻度が低い部品で, 在庫しないことがあり, 納期が長くなることがある。

4. コンデンサ, 抵抗の単位
   回路図, 分解図, 電気部品表中, 特に明記したものを除き, 下記の単位は省略されていることがある。
   コンデンサ : μF
   抵抗 : Ω

### 2-5-2. フレキシブルカード電線の交換方法

このセットには, 下記のフレキシブルカード電線が使用されている。
フレキシブルカード電線は, 折れに対しては, 著しく寿命を短くするので, 取り扱いには充分注意すること。

| 接続先 | ピンの数 | フレキシブルカード線数 |
|---|---|---|
| SY-209 基板<br>KSW-26 基板 | 16P | 1本 |
| SY-209 基板<br>KSW-27 基板 | 20P | 1本 |
| SY-209 基板<br>CN-1078 基板 | 16P | 1本 |
| KSW-26 基板<br>ズームスイッチ | 5P | 1本 |

<ZIF型コネクタ>

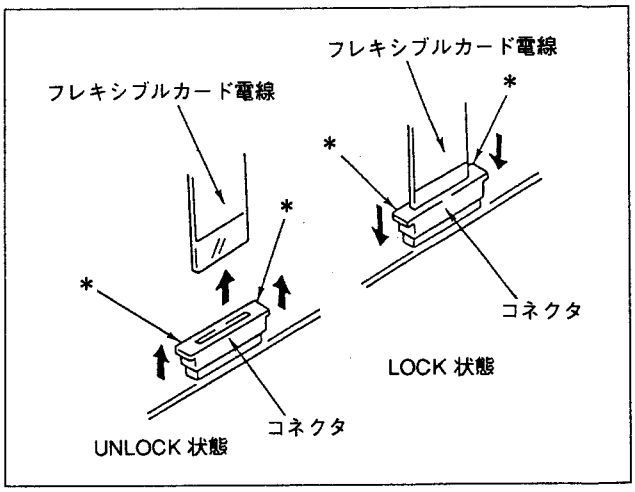
取り外し方法

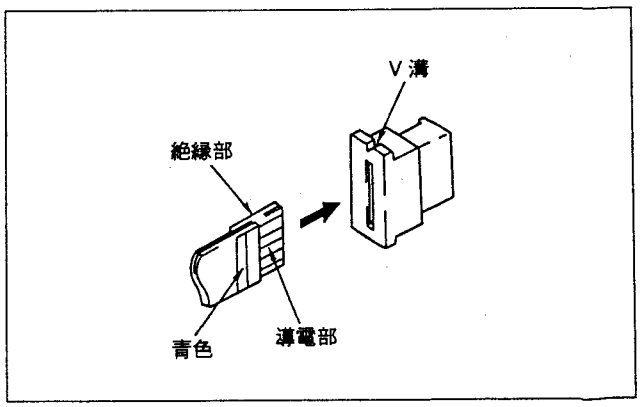
コネクタの＊印部を持ち上げロックを解除し, フレキシブルカード電線を抜く。

取り付け方法

フレキシブルカード電線を表示の線までしっかり挿入し, コネクタの＊印部を押し上げる。

※ ロック機構のないものは, 上記に準じた手順で確実に挿抜を行う。




注意 :
フレキシブルカード電線には導電部と絶縁部があるので, 図を確認後接続する。
導電部と絶縁部の向きを間違えて接続すると, 回路が動作しない。

## 2-6. カメラ組立について

カメラ組立の詳細についてはEVI-130/131のサービスマニュアルを参照。

# 第3章
# 調整要項

## 3-1. 電気調整

### 3-1-1. 使用機器

- オシロスコープ (テクトロニクス2445B相当品/150MHz以上)
- ベクタースコープ (テクトロニクス520A相当品)
- マルチフォーマット信号発生器 (テクトロニクスTSG-130相当品 S-VIDEO OUT付)
- モニターTV
- S-VIDEO信号ケーブル
- BNC-BNCケーブル
- BNC-PINケーブル

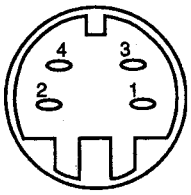
### 3-1-2. 調整前の準備

S-VIDEO信号ケーブルの作製

用意するもの : 市販の5mのS-S端子ケーブル
ワニグチクリップ 4個

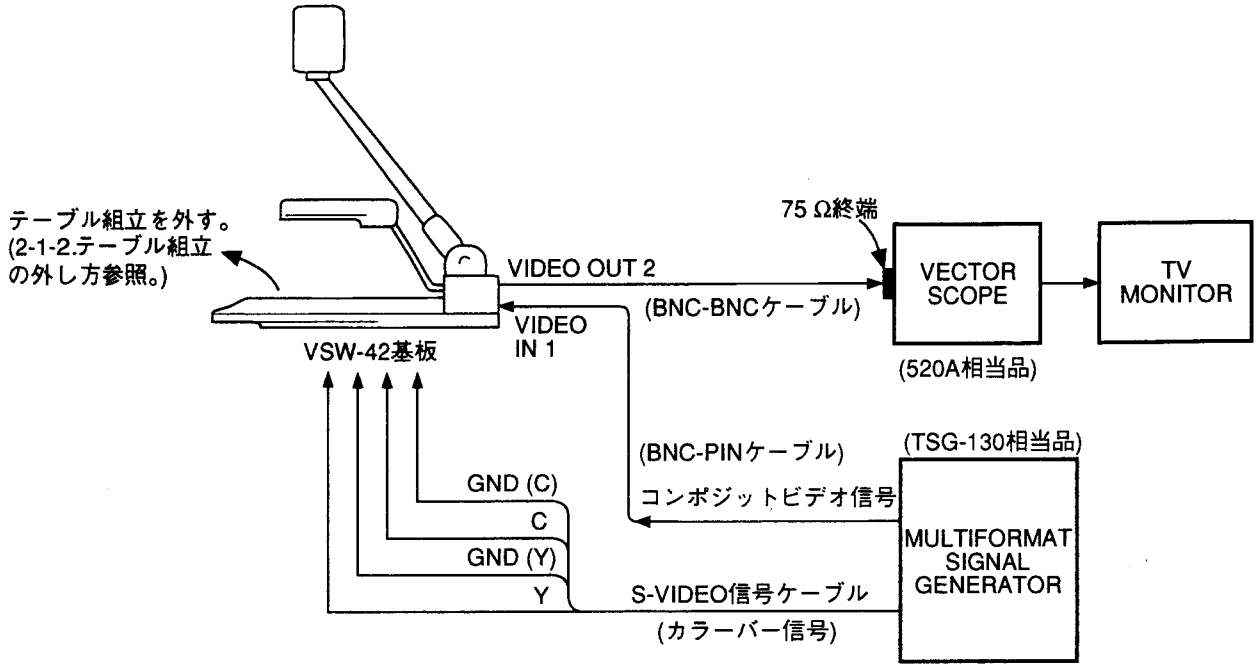
作製方法 : 1. 接続ケーブルを半分に切断する。
2. 接続ケーブルの外皮をカッタナイフで取り去る。
3. シールド線被履をニッパで取り去る。
4. Y/Cの芯線をテスターで確認する。
5. 各芯線にワニグチクリップを接続する。

S-VIDEOコネクタ



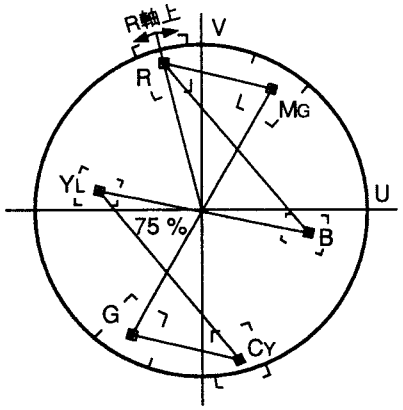

1 GND (Y)
2 GND (C)
3 Y
4 C

3-1-3. 接続図

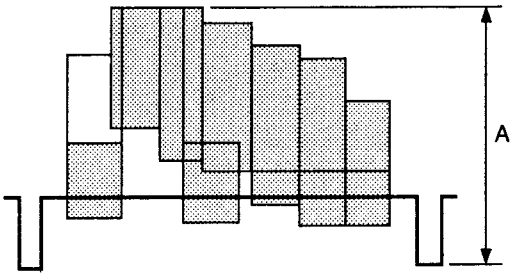
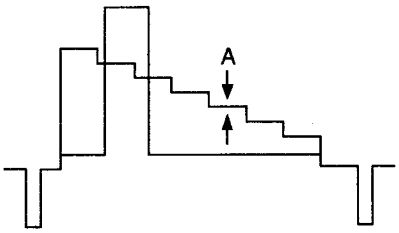



- 信号発生器からのC信号をR201/VSW-42基板 (J-6) のCN201-2ピン側に接続する。
- 信号発生器からのGND (C) をR201/VSW-42基板 (J-6) のCN201-1ピン側に接続する。
- 信号発生器からのY信号をR221/VSW-42基板 (J-5) のCN201-4ピン側に接続する。
- 信号発生器からのGND (Y) をR221/VSW-42基板 (J-5) のCN201-3ピン側に接続する。

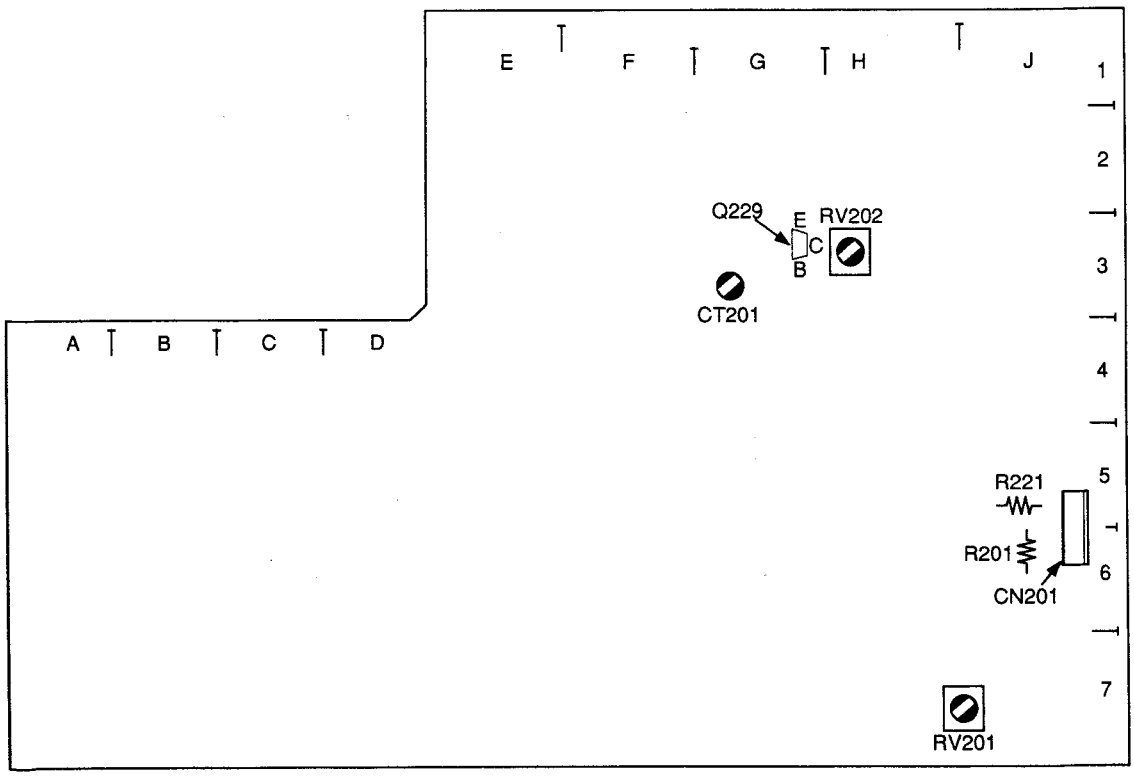
3-1-4. ネガ・ポジ反転位相調整

| 調整時の状態 | 規格 | 調整箇所 |
|---|---|---|
| • CN201/VSW-42基板 (J-6) を外す。<br>• 接続図を参照し, S-VIDEO信号ケーブルをVSW-42基板に接続する。<br>• POWERスイッチをONにする。<br>• 操作パネルのビデオアウトボタンのVIDランプが点灯していることを確認する。<br>• 操作パネルのネガボタンを押し, ランプを点灯させる。<br>• 調整後S-VIDEO信号ケーブルを外し, CN201を接続する。<br>• POWERスイッチをOFFにする。 | VIDEO OUT 2コネクタ (75Ω終端)<br>Vectorscope<br>  <br><br>REDの輝点がR軸上 ± 3° | RV201/VSW-42 (H-7) |

3-1-5. Y/C分離調整

| 調整時の状態 | 規格 | 調整箇所 |
|---|---|---|
| • VIDEO IN 1 : カラーバー信号<br>• POWERスイッチをONにする。<br>• 操作パネルのビデオアウトボタンのビデオ1ボタンを押し，ランプを点灯させる。 | ステップ1<br>Q229のエミッタ/VSW-42 (G-3)<br>オシロスコープ<br>  <br><br>A = 1.00 ± 0.04 Vp-p | RV202/VSW-42 (H-3) |
| | ステップ2<br>Q229のエミッタ/VSW-42 (G-3)<br>オシロスコープ<br>  <br><br>A (クロマの振幅) = 50 mV以下 | CT201/VSW-42 (G-3) |

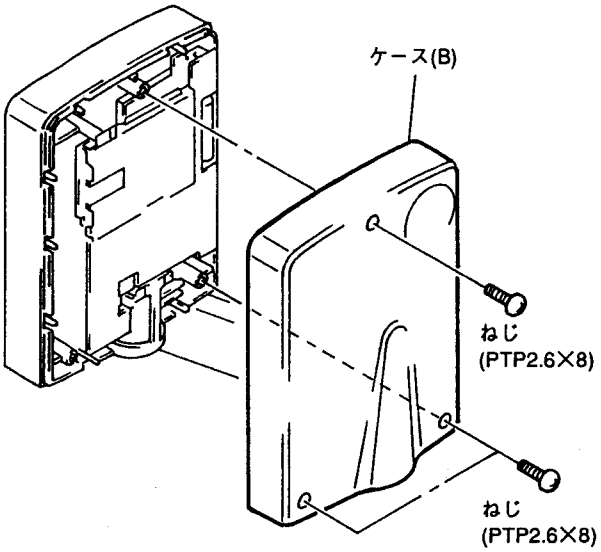
3-1-6. 調整配置図(VSW-42基板)

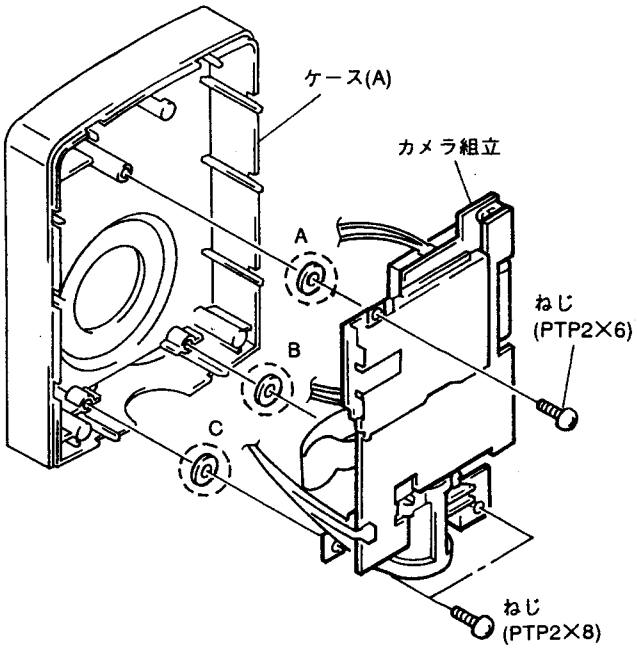


## 3-2. メカ調整 (モニターレンズの光軸調整)

モニターレンズの光軸調整は, 次の手順で行います。

1. カメラをWIDE状態にし, モニターを写し出したとき, テーブル上にあるバックライト枠がモニター画面上で, 左右に片寄りがないことを確認する。
   片寄りがある時は, 以下の調整を行う。
2. 下図のねじ (PTP2.6×8) 3本を外し, ケース (B) を取り外す。
3. 下図に示すねじ (PTP2×8) 2本およびねじ (PTP2×6) を外し, カメラ組立を取り外す。
4. 右に片寄りがある場合
   図に示す A (PTP2×6) の位置に必要に応じてワッシャを入れ, 片寄りを調整する。
5. 左に片寄りがある場合
   図に示す B,C (PTP2×8) の位置に必要に応じてワッシャを入れ, 片寄りを調整する。



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# Introduction

The VID-P100 Video Presentaion Stand allows you to display visual materials such as paper-based documents, transparent sheets, slides, film negatives, and solid objects on a color monitor or projector by shooting them with a color video camera.

## Features

The VID-P100 has the following features.

### Easy to Connect

Visuals can be displayed by simply connecting a color monitor because the camera, lens, light, and power supply are all incorporated in the one unit.

### Sharp Screen

383,000 (for the NTSC model) or 443,000 (for the PAL model) pixels of the 1/3-inch CCD pickup device allows 420 TV lines of horizontal resolution, giving a high screen resolution. An S VIDEO OUT connector allows you to connect a monitor equipped with a S VIDEO IN connector, thus giving you even higher screen resolution.

### Easy to Adjust

Focus, iris and white balance adjust automatically after power-on. You can also adjust each setting manually depending on the picture to be displayed.

### 10 x Power Zoom Lens

The 10 x power zoom lens of this unit allows you to display various materials ranging in size from a standard film to a 10" x 14" (310 x 235 mm) sheet on the screen.

### Quick Response Auto Focus

As the inner focus lens is used, this unit can correctly adjust focus position just for one or two seconds. This feature allows your smart presentation.

### Tilting and Panning Mechanism

By flipping the camera upwards through 90 degrees, you can pan and/or tilt the camera to shoot material pasted on the wall or even yourself.





This section is extracted from operation manual.

### Easily Removable Close-up Lens

After flipping up the camera, you can easily remove the close-up lens with revolving it.

### Various Materials Can Be Shot and Displayed

Various materials from paper-based documents and transparent sheets to slides, film negatives and solid objects can be shot and displayed. To shoot and display film negatives, just press the appropriate button to change the lighting and white balance settings.

### Built-in Back Light

The built-in back light allows transparent sheets, slides or film negatives to be shot and displayed on a monitor. To use the back light, just press one button.

### Built-in Video Selector

A video selector is incorporated in this unit. It allows you to switch the pictures shot with this unit to those from the connected video equipment such as a VTR and laserdisc player and vice versa, and so make impressive presentations.

### Sound Mixing Function

You can add a running commentary simply by connecting a microphone and a monitor with speakers. In addition, existing audio signals can be mixed with the audio signal from the microphone connected, so you can add a commentary while displaying video signals via the built-in video selector on a monitor.

### External Control from a Computer

An RS-232C interface is provided with this unit. This interface allows the unit to be controlled from an external computer. Refer to the "Interface Manual" for details of the commands for controlling the unit from the computer.

### Easy to Transport

The unit can be collapsed so easily and weights so little (7.8 kg (17 lb 3 oz)) that it can be carried with no trouble, allowing you to make a presentation anywhere.

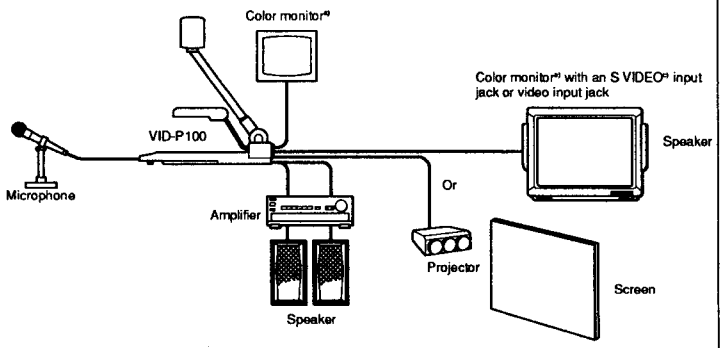


## Introduction(Continued)

# System Configuration

### Basic Configuration

The basic system for making a presentation or displaying educational materials is as follows:




a) This color monitor is placed beside the person who is giving the presentation and is connected to the VIDEO OUT 1 or 2 jack of the VID-P100.

b) This color monitor is placed in the hall or class room and connected to the VIDEO OUT 2 or S VIDEO OUT jack of the VID-P100.

c) The S VIDEO input jack provides you with a better picture.

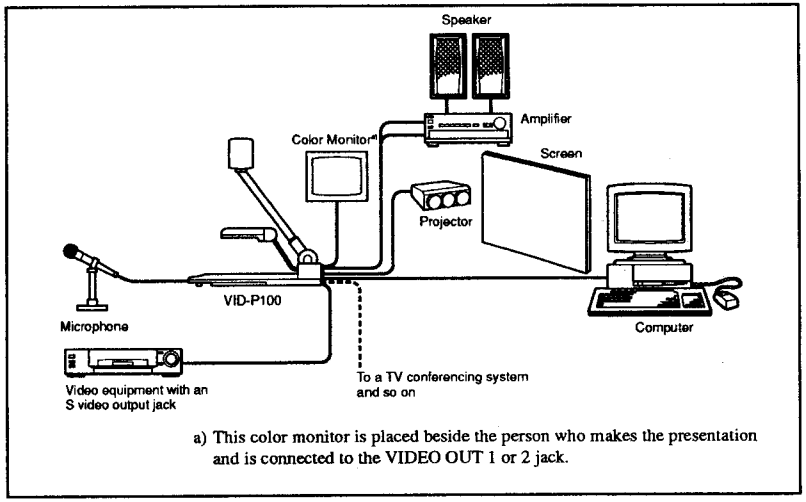
Basic configuration

## Advanced System

When you connect a computer to the RS-232C connector of the VID-P100, you can control the VID-P100 from the computer. When you connect video equipment such as a VTR and a laserdisc player to this unit, you can switch the picture shot with this unit and that from the connected video equipment, and vice versa.

**Note**

When you control the VID-P100 from a computer, special software is required. To program in this software, refer to the "Interface Manual".



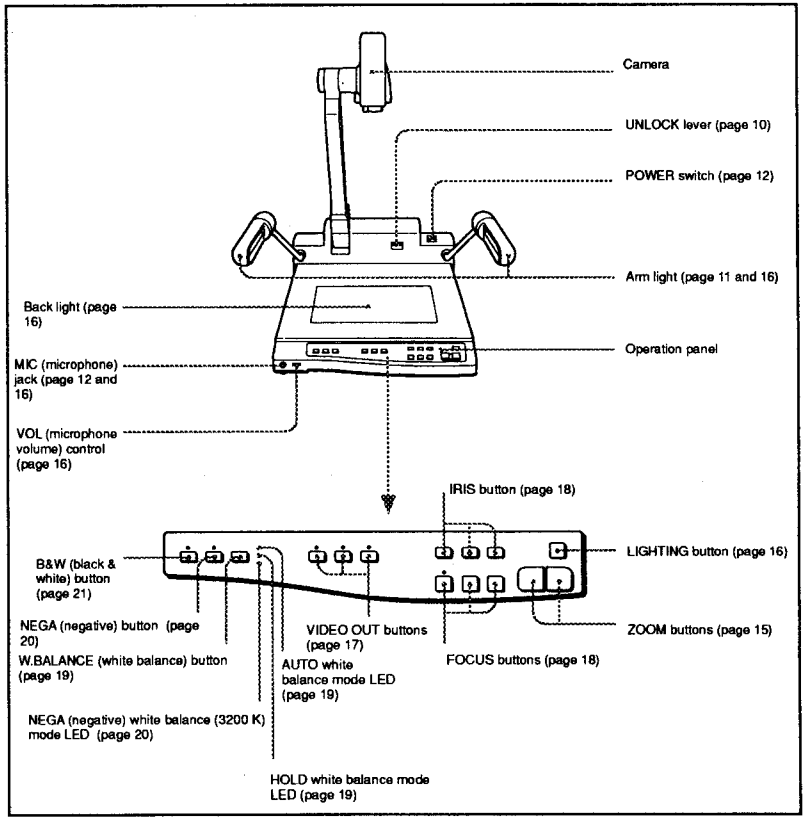

a) This color monitor is placed beside the person who makes the presentation and is connected to the VIDEO OUT 1 or 2 jack.

Advanced system

# Parts Identification

For details on the use of each part, see the pages indicated in parentheses.

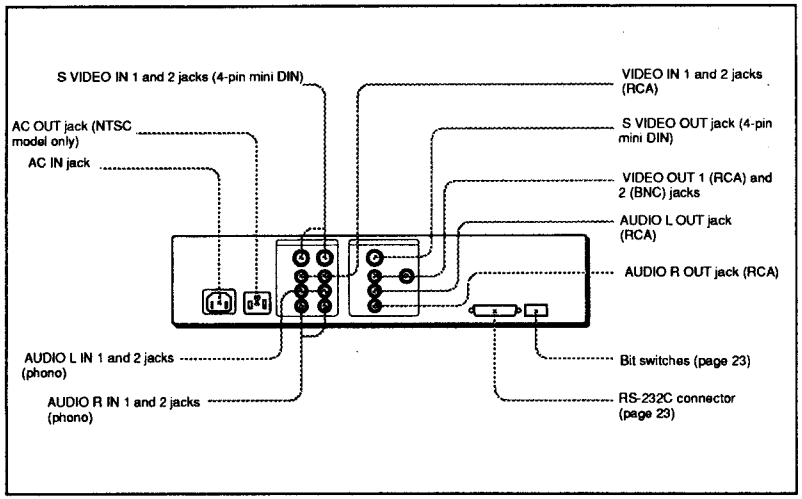
## Camera and Operation Panel


Camera
UNLOCK lever (page 10)
POWER switch (page 12)
Arm light (page 11 and 16)
Back light (page 16)
Operation panel
MIC (microphone) jack (page 12 and 16)
VOL (microphone volume) control (page 16)
IRIS button (page 18)
LIGHTING button (page 16)
B&W (black & white) button (page 21)
NEGA (negative) button (page 20)
VIDEO OUT buttons (page 17)
ZOOM buttons (page 15)
W.BALANCE (white balance) button (page 19)
AUTO white balance mode LED (page 19)
FOCUS buttons (page 18)
NEGA (negative) white balance (3200 K) mode LED (page 20)
HOLD white balance mode LED (page 19)

Camera and operation panel

## Rear Panel

For details on the use of the jacks, see page 12.


S VIDEO IN 1 and 2 jacks (4-pin mini DIN)
AC OUT jack (NTSC model only)
AC IN jack
AUDIO L IN 1 and 2 jacks (phono)
AUDIO R IN 1 and 2 jacks (phono)
VIDEO IN 1 and 2 jacks (RCA)
S VIDEO OUT jack (4-pin mini DIN)
VIDEO OUT 1 (RCA) and 2 (BNC) jacks
AUDIO L OUT jack (RCA)
AUDIO R OUT jack (RCA)
Bit switches (page 23)
RS-232C connector (page 23)

Rear panel



# Preparation

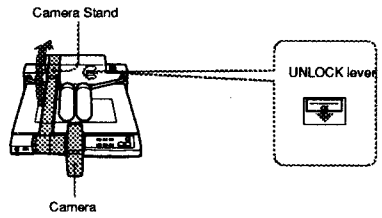
## Precautions

- Unplug the VID-P100 from the wall outlet when it is not being used for a long period of time. To disconnect the cord, pull it out by grasping the plug. Never pull it out by the cord itself.
- The fluorescent lamps can get hot during operation. **Do not touch the lamps during operation** and when collapsing the VID-P100.
- Clean the lens with an air spray or soft dry cloth, taking care not to scratch it.
- Clean the cabinet with a soft cloth lightly moistened with a mild detergent solution. Never use any type of solvent such as alcohol or benzine, which might damage the finish.
- When the fluorescent lamps flash or get darkened, contact your Sony dealer.

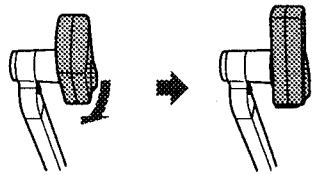
## Setting Up the Unit

The VID-P100 is packed in a collapsed form at the factory. After taking it out of the package, set it up for normal operation.

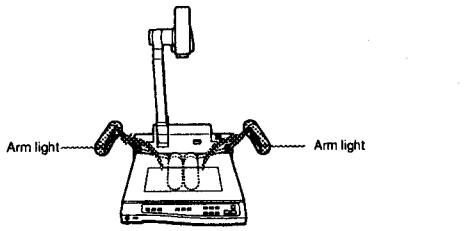
**1** Lift up the camera stand with the camera attached while keeping the UNLOCK lever pressed down.




**2** Adjust the camera to the direction illustrated by the arrow mark so that the lens faces downwards.

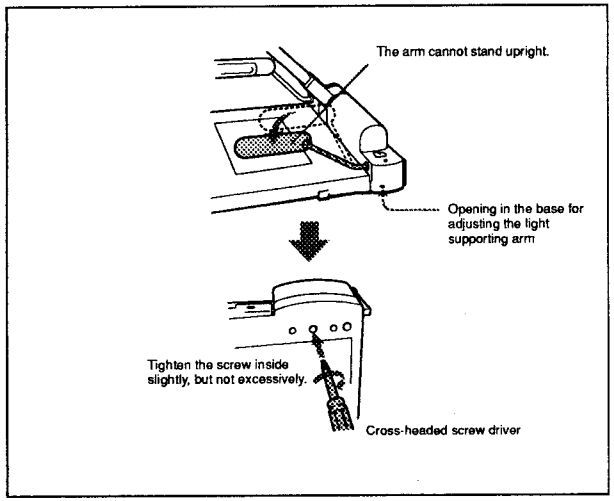


**3** Adjust both arm lights to their fixed positions respectively.




## If the Light Supporting Arms Loosen

If the arms will not stay upright, the screw in the base may have become loosened. After turning off the POWER switch, tighten the screw as shown below.


The arm cannot stand upright.
Opening in the base for adjusting the light supporting arm
Tighten the screw inside slightly, but not excessively.
Cross-headed screw driver

To secure the light supporting arms in position



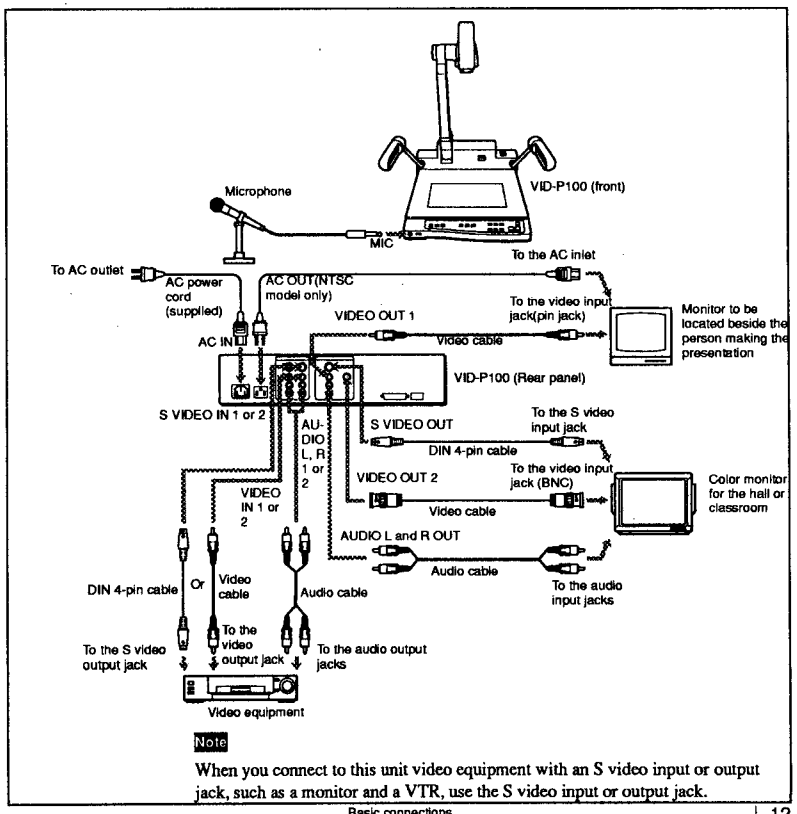


# Connecting the Unit to Other Equipment

**Notes on connections**

- Before making any connections, turn off the power of the VID-P100 and the equipment to be connected.
- Before connecting a device such as a monitor to the AC OUT jack of the VID-P100, check to see if the power consumption is 300W or less. Do not connect any device whose power consumption is over 300W to the VID-P100.

## Connections for the Basic System



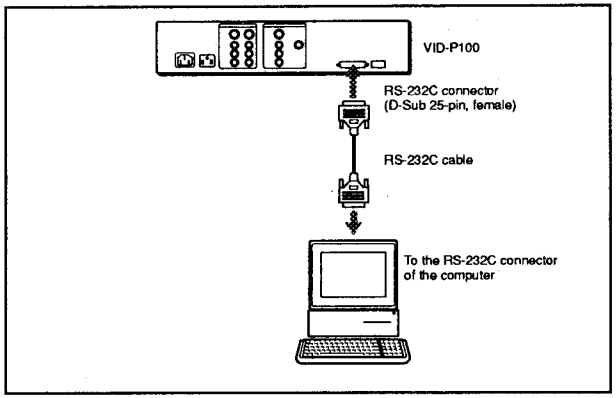

**Note**

When you connect to this unit video equipment with an S video input or output jack, such as a monitor and a VTR, use the S video input or output jack.

Basic connections

## Connections for External Control from a Computer

After performing the basic connections on the previous page, make the connections listed below to control this unit from the computer connected.




Connection for external control from a computer

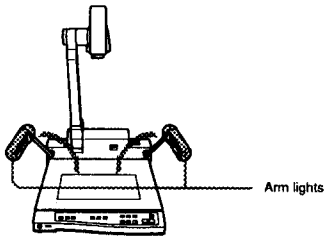




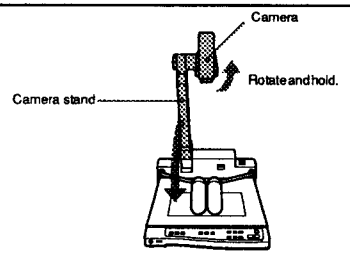
## Collapsing the Unit

Follow the instructions below to collapse the VID-P100 for transportation or convenience.

**1** Fold both arm lights down onto the base.




**2** Rotate the camera to its original position as illustrated by the arrow mark. Carefully fold down the camera stand together with the camera onto the base slowly. The stand is now locked in place, and cannot be moved. To unlock the stand to enable operation of the VID-P100, see "Setting Up the Unit" on page 10.



# Operation

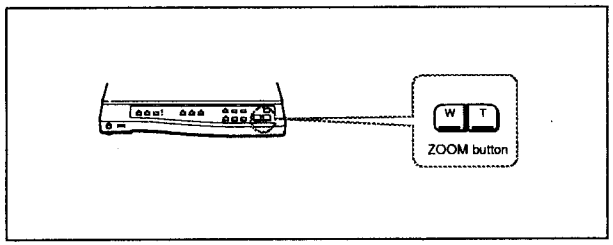
In this section, the basic operation for displaying normal materials, advanced operation for displaying special materials such as film negatives, and the operation for controlling the VID-P100 from a computer are all described.

## Basic Operation

At power-on, the VID-P100 automatically turns on the arm lights, adjusts the focus, iris (brightness), and white balance. The only thing to do now is to zoom the image on the screen to display a normal document.

### Zooming the Image on the Screen

To zoom into or out from the image on the screen, use the ZOOM button on the operation panel. The VID-P100 offers two levels of speed zooming. Press the button firmly for high speed zooming and softly for slower zooming.
To zoom out from the image for panoramic long shots, press the W (wide-angle) button. To zoom into the image for close-ups, press the T (telephoto) button.



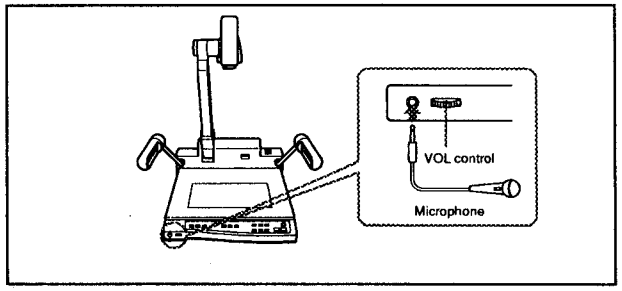

ZOOM adjustments





### Adjusting the Microphone Level

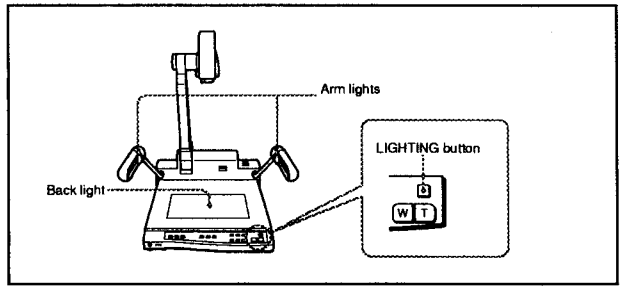
Use the VOL control on the front of the VID-P100 to adjust the level of the microphone connected to the MIC jack. Turn it to the right to increase the volume. Turn it to the left to decrease the volume.




Microphone level adjustments

### Switching the Lighting (from the Arm Lights to the Back Light)

The arm lights are automatically turned on at power-on. When shooting and displaying transparencies, press the LIGHTING button to switch the lighting from the arm lights to the back light.
To turn off both the arm lights and the back light, press the LIGHTING button again. Press the LIGHTING button one more time to light the arm lights.




To switch the lighting

## Selecting the Signals To Output

The VIDEO OUT button on the operation panel allows you to select the video and audio signals, including those from the camera and the MIC jack of the VID-P100, to output.

**To output the video signal from the camera of the VID-P100 and the audio signal from the microphone connected to the MIC jack**

At power-on, the VID indicator lights, and the video signal from the camera of the VID-P100 and the audio signal from the microphone connected to the MIC jack are automatically output.
When you select any video signal and audio signal from the input jacks, press the VID button.

**To output a signal from the video equipment connected to the S VIDEO IN 1 jack or VIDEO IN 1 jack and the AUDIO L and R IN 1 jacks**

Press the VIDEO 1 button. The VIDEO 1 indicator lights, and the video signal from the S VIDEO IN 1 or VIDEO IN 1 jack and the audio signal from the AUDIO L and R IN 1 jacks are output. Note that the audio signal from the connected microphone is also mixed in on this audio signal.

Note

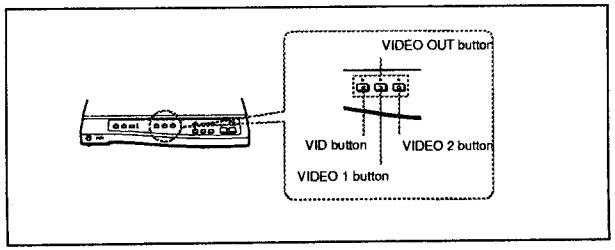
When you connect video equipment to both the S VIDEO IN 1 jack and the VIDEO IN 1 jack, the video signal from the S VIDEO IN 1 jack is automatically output.

**To output a signal from the video equipment connected to the S VIDEO IN 2 jack or VIDEO IN 2 jack and the AUDIO L and R IN 2 jacks**

Press the VIDEO 2 button. The VIDEO 2 indicator lights, and the video signal from the S VIDEO IN 2 or VIDEO IN 2 jack and the audio signal from the AUDIO L and R IN 2 jacks are output. Note that the audio signal from the connected microphone is also mixed in on this audio signal.

Note

When you connect video equipment to both the S VIDEO IN 2 jack and the VIDEO IN 2 jack, the video signal from the S VIDEO IN 2 jack is automatically output.




To select the signal to output





# Advanced Operation

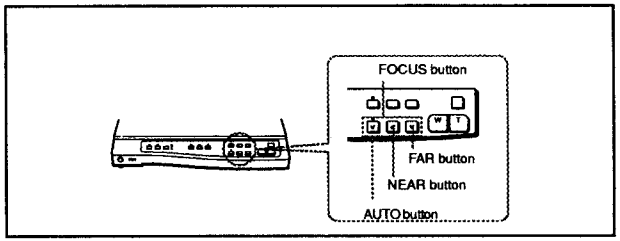
## Adjusting the Image to Your Taste

The VID-P100 automatically adjusts the focus, iris and white balance when you turn on the power and set the material to be displayed in the middle of the screen. You can also adjust them yourself manually as you wish.

### Adjusting the Focus Manually

Use the FOCUS button on the operation panel for adjusting the focus. To focus the object far away from the VID-P100, press the FAR button. To focus the object near the VID-P100, press the NEAR button. Manually adjust the focus when you display:

- a material whose brightness and darkness are difficult to distinguish, or
- a three-dimensional object.




Focus adjustments

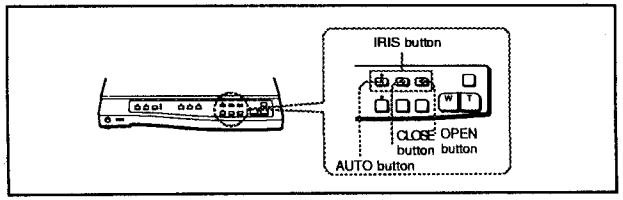
**To return to Auto-focus adjustment mode**

Press the AUTO button to light the AUTO indicator.

### Adjusting the Iris (Brightness) Manually

To adjust the iris (brightness), use the IRIS button on the operation panel. To increase the brightness, press the OPEN button. To decrease the brightness, press the CLOSE button. Manually adjust the iris when you want to display:

- an object which reflects light,
- the contrast appropriately, or
- a pale-colored film negative.



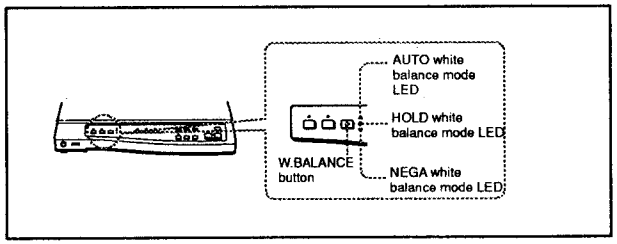

Iris adjustments

**To return to Auto-iris adjustment mode**
Press the AUTO button to light the AUTO indicator.

## Displaying the Natural Color of a Material (Locking the White Balance Setting)

The VID-P100 automatically adjusts the white balance. In Hold mode, it also locks the last automatic white balance setting and maintains it even when the lighting conditions change, thus allowing the color of the material to be displayed naturally.
The mode of the white balance can change from Automatic, to Hold, then Film Negatives and the corresponding LED lights every time the W.BALANCE button is pressed. To hold the white balance setting, press the W.BALANCE button to light the HOLD white balance mode LED. The white balance setting which adjusts immediately before you pressed the button is held. Hold the white balance setting when you display :

- a monochromatic material or background, or
- a pale colored material.




To display the natural color of a material (locking the white balance setting)

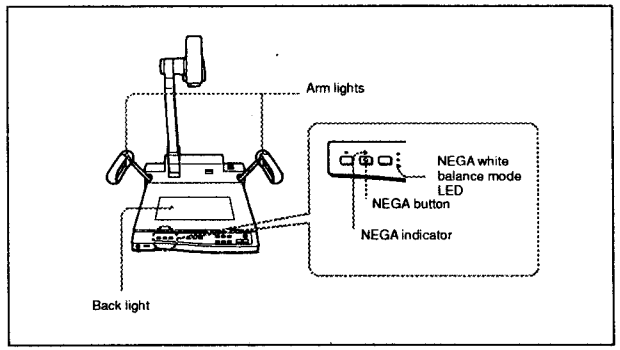
**To adjust the white balance automatically**
Continue pressing the W.BALANCE button until the AUTO white balance mode LED lights.





## Displaying Film Negatives

The VID-P100 is automatically set to display normal materials on the screen at power-on. Press the NEGA button on the operation panel to display film negatives. The NEGA indicator above the button lights to indicate that the VID-P100 has entered Film Negative mode. At the same time, the arm lights go off, and the back light lights. The white balance is adjusted for film negatives (3200K), and the NEGA white balance mode LED lights.



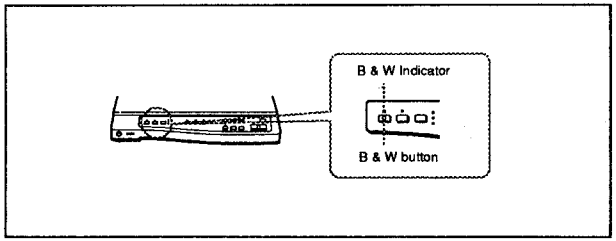

Displaying film negatives

**To display normal material on the screen**
Press the NEGA button when the NEGA indicator is lighting. The white balance mode is set to "AUTO" and the AUTO indicator lights to confirm that the white balance is now being adjusted automatically. The back light, however, remains lit, so press the LIGHTING button twice to light the arm lights.

## Setting the Screen in Monochrome Mode

To set the screen in monochrome mode, press the B&W button. The indicator above the B&W button lights to indicate that the screen is now set in Monochrome mode. Set the screen in Monochrome mode when:

- you display black and white material such as a black and white document or a black and white film, or
- you display a color material in black and white.




To set the screen in monochrome mode

Note

If you shoot and display a finite pattern such as a column of newsprint, a few colored dots may still flicker. In this case, set the screen to Monochrome mode or connect a monitor via the S VIDEO OUT jack.

### To set the screen in color mode

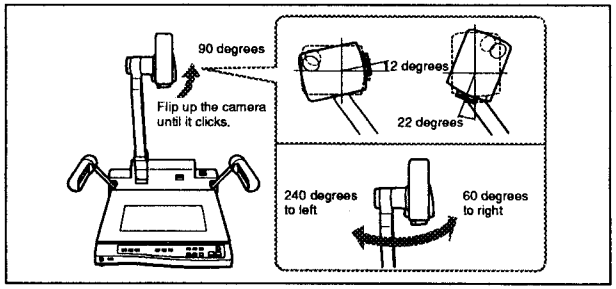
Press the B&W button again. The B & W indicator goes off and the screen is once more set to color mode.





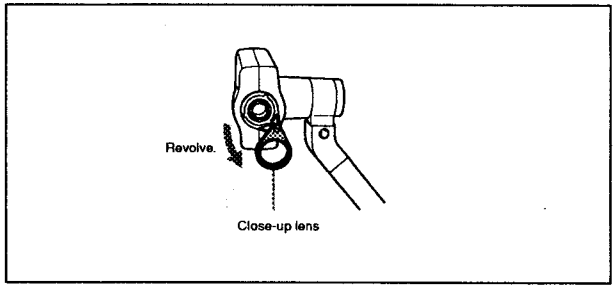
## Changing the Camera Direction

The VID-P100 allows you to flip up the camera, and move it from left to right, or up and down. Therefore, you can shoot and display the audience, students, or even yourself. To shoot an object far away from the VID-P100 itself, remove the close-up lens.




Changing the camera direction

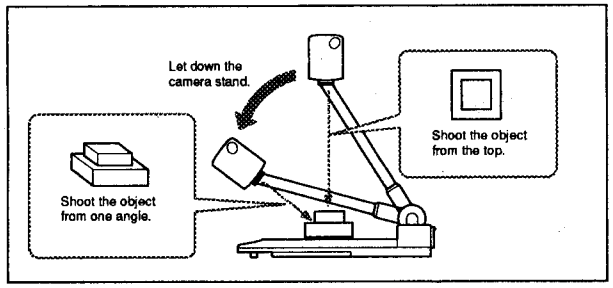
### To remove the close-up lens




To remove the close-up lens

### To shoot a three-dimensional object

To shoot and display a three-dimensional object, let down the camera stand. You can also shoot it from one angle.

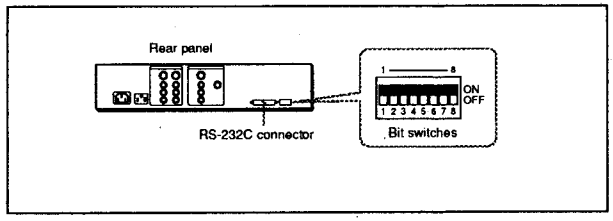



To shoot a three-dimensional object

## Controlling the VID-P100 from a Computer

You can control the VID-P100 from a computer connected by an RS-232C connector. However, the software to control the VID-P100 must first be installed. Refer to the "Interface Manual" for details on the communication protocol for this software.

Set the bit switches on the rear panel, if necessary, to control the VID-P100 from a computer.
Refer to the the "Interface Manual" for how to set the bit switches.




To control the unit from a computer



# Specifications

| | |
|---|---|
| Color system | NTSC or PAL color system |
| Pickup device | 1/3" interline transfer method, CCD (Charge Coupled Device) |
| Resolution | Horizontal: 420 TV lines |
| Picture elements | 383,000, 768 x 494 (H/V)(NTSC model)<br>443,000, 752 x 582(PAL model) |
| Filming range | 310 x 235 mm (at wide-angle)<br>34 x 25.5 mm (at telephoto) |
| Lens | 10 x power zoom lens<br>f = 6.2 to 62 mm (1/4 to 2 1/2 inches)<br>F = 1.6 to 2.9 |
| Focus | Auto/manual selectable |
| Iris | Auto/manual selectable |
| White balance | Auto/manual selectable |
| Positive/negative film selection function | Built-in |
| Monochrome/color selection function | Built-in |
| Output signal selectable | Three (VID/VIDEO1/VIDEO2) |
| Light | Arm light: 9W twin-fluorescent lamp x 2<br>Back light: 8W fluorescent lamp x 2 |
| Input jack | VIDEO IN (RCA jack) (2)<br>1 Vp-p, 75 Ω, sync negative<br>S VIDEO IN (4-pin mini DIN) (2)<br>Y: 1 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω(NTSC model),<br>0.300 Vp-p, 75 Ω(PAL model)<br>AUDIO IN (RCA jack) (2)<br>Input impedance: 47 kΩ<br>Level: –10 dBs, unbalanced<br>MIC (standard jack) (1)<br>Input impedance: 3.3 kΩ<br>Level: –60 dBs, unbalanced |
| Output jack | VIDEO OUT (RCA jack) (1)<br>1 Vp-p, 75 Ω, sync negative<br>VIDEO OUT (BNC) (1)<br>1 Vp-p, 75 Ω, sync negative<br>S VIDEO OUT (4-pin mini DIN) (1)<br>Y: 1 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω(NTSC model),<br>0.300 Vp-p, 75 Ω(PAL model)<br>AUDIO OUT (RCA jack) (1)<br>Output impedance: less than 600 Ω<br>Level: –10 dBs, unbalanced<br>AC OUT (auxiliary AC outlet) (NTSC model only)<br>unswitched, maximum 300W |
| RS-232C connector | D-Sub, 25-pin |

| | |
|---|---|
| Power requirements | 120 V AC, 50/60 Hz (NTSC model)<br>230 V AC, 50/60 Hz (PAL model) |
| Power consumption | 30 W (PAL model), 120 V, 0.28A (NTSC model) |
| Dimensions | After set up: Approximately 572 x 684 x 620 mm (w/h/d) (22 5/8 x 27 x 24 1/2 inches)<br>After collapsed: Approximately 446 x 190 x 720 (w/h/d) (17 5/8 x 7 1/2 x 28 3/8 inches) |
| Mass. | Approximately 7.8 kg (17 lb 3 oz) |
| Supplied accessories | AC power cord (1)<br>Operation manual (1)<br>Interface manual (1) |

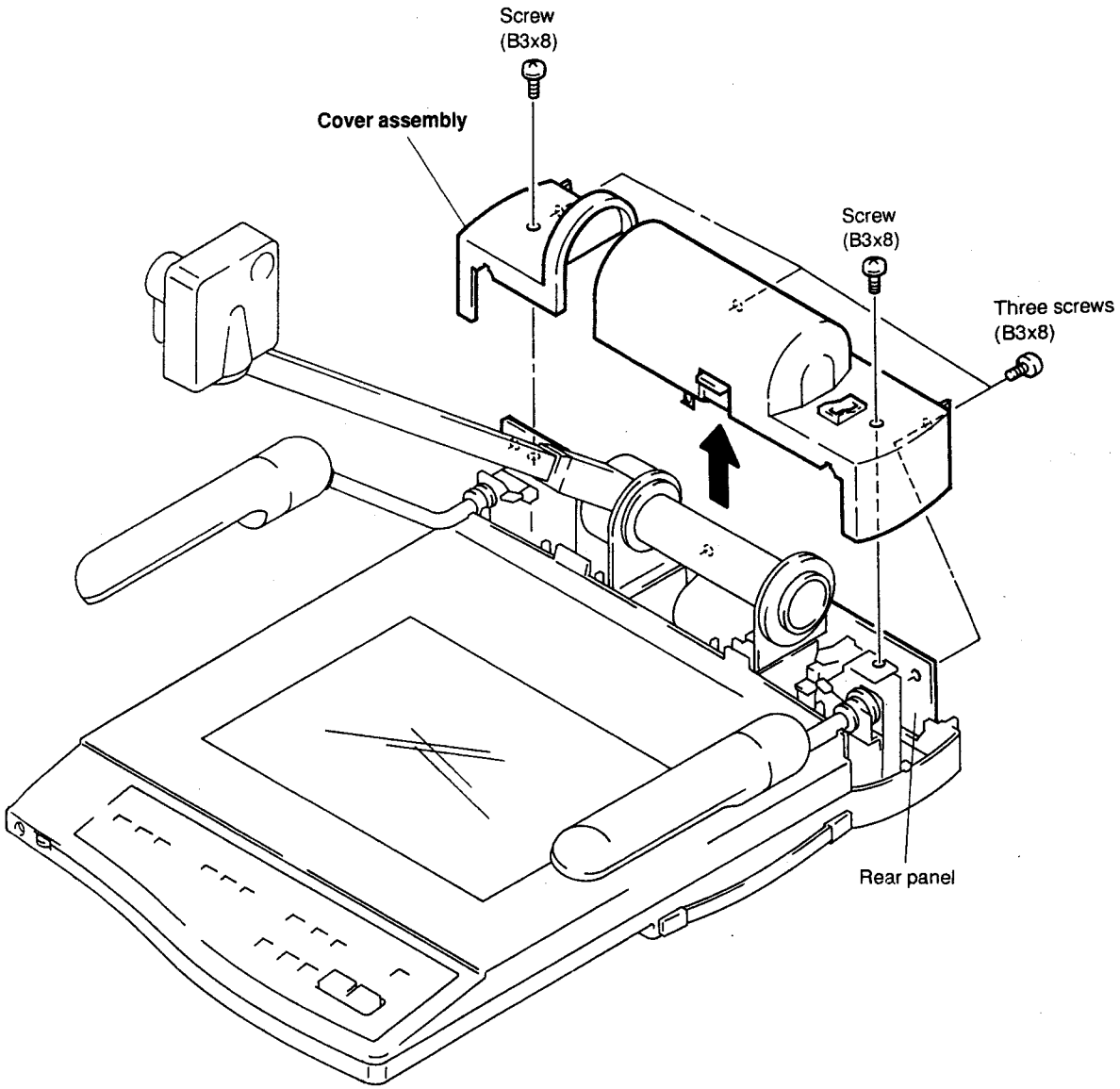
The design and specifications are subject to change without notice.

# SECTION 2
# SERVICE OVERVIEW

## 2-1. REMOVAL OF MAIN PARTS

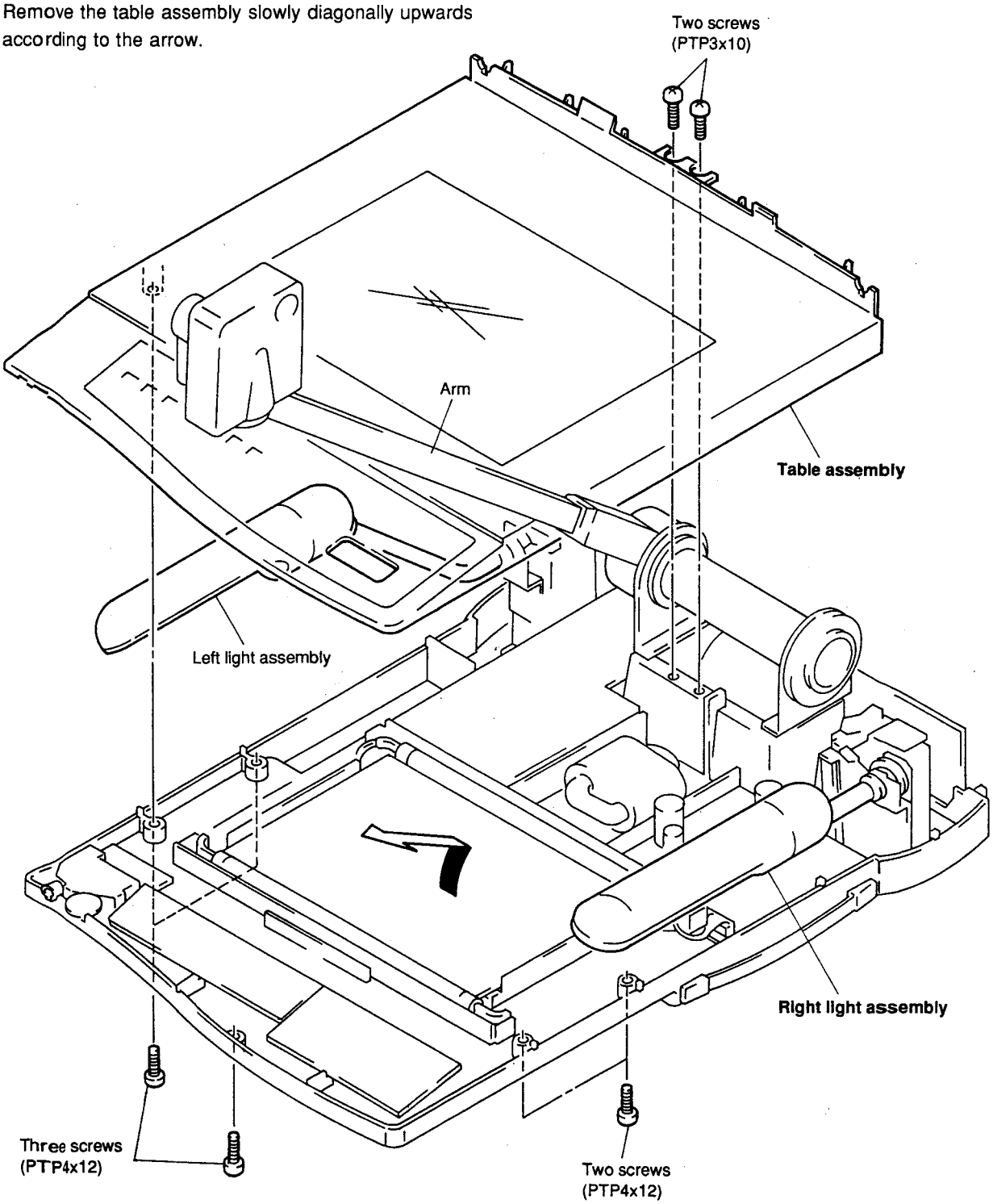
### 2-1-1. Removal of Cover Assembly

1. Remove the two screws (B3X8).
2. Remove the three screws (B3X8) of the rear panel, then remove the cover assembly in the direction of arrow.



### 2-1-2. Removal of Table Assembly

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the five screws (PTP4X12) shown in the figure.
3. Remove the two screws (PTP3X10) securing the table assembly .
4. Move the left/right light assembly and arm to the positions shown in the figure.
5. Remove the table assembly slowly diagonally upwards according to the arrow.

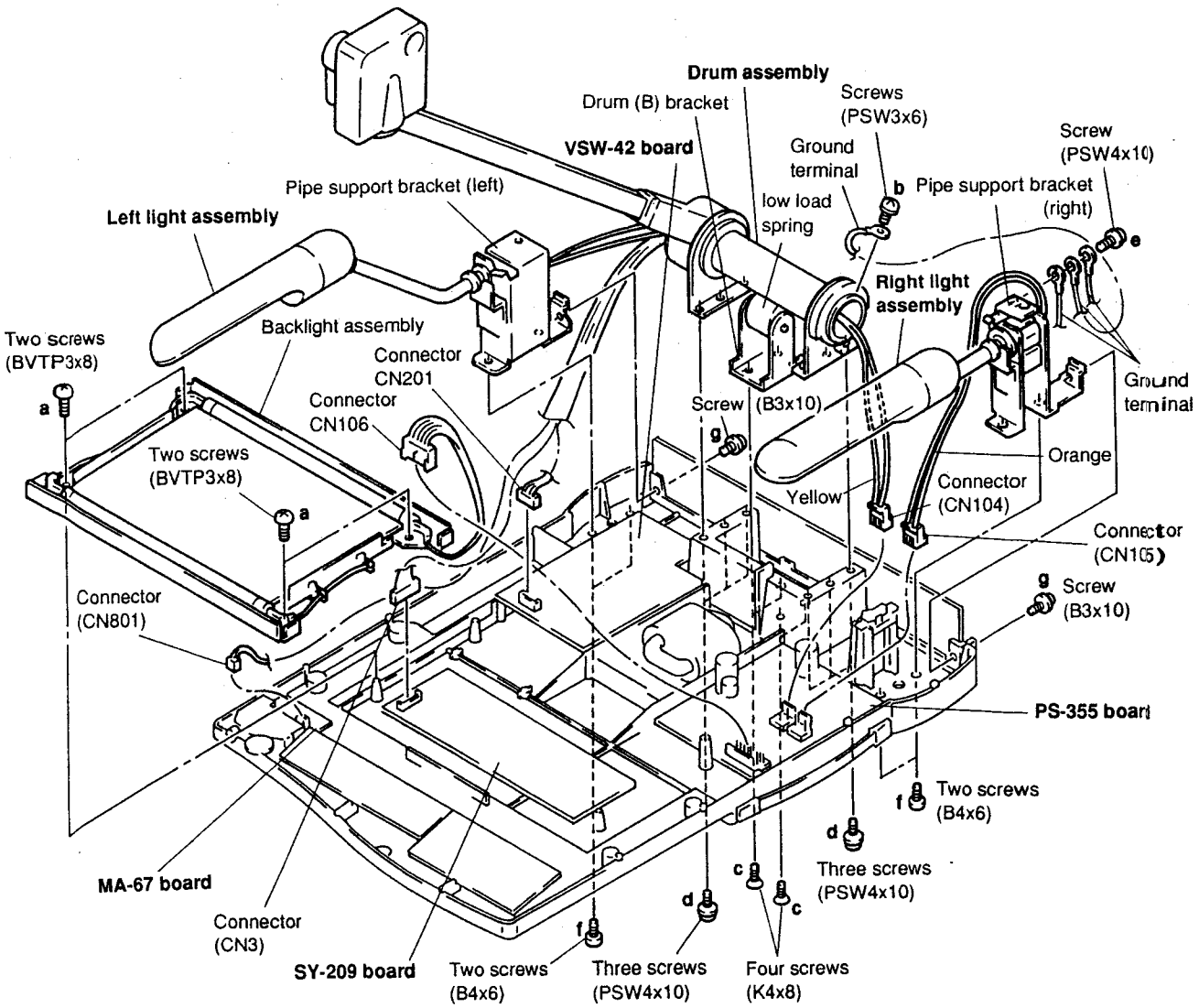


### 2-1-3. Removal of Drum

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-1.)
3. Disconnect one connector (CN106) on the PS-355 board and remove the four screws **a** (BVTP3X8), then remove the backlight assembly.
4. Disconnect the connector (CN104) on the PS-355 board.
5. Disconnect the connector (CN801) on the MA-67 board.
6. Disconnect the connector (CN3) on the SY-209 board.
7. Disconnect the connector (CN201) on the VSW-42 board.
8. Remove the three screws **b** (PSW3X6), then remove the ground terminal from the drum assembly.
9. Remove the four screws **c** (K4X8) clamping the drum (B) bracket not to rebound the low load spring pressing with your hand.
10. Remove the six screws **d** (PSW4X10) from the bottom of the chassis, then remove the drum assembly.

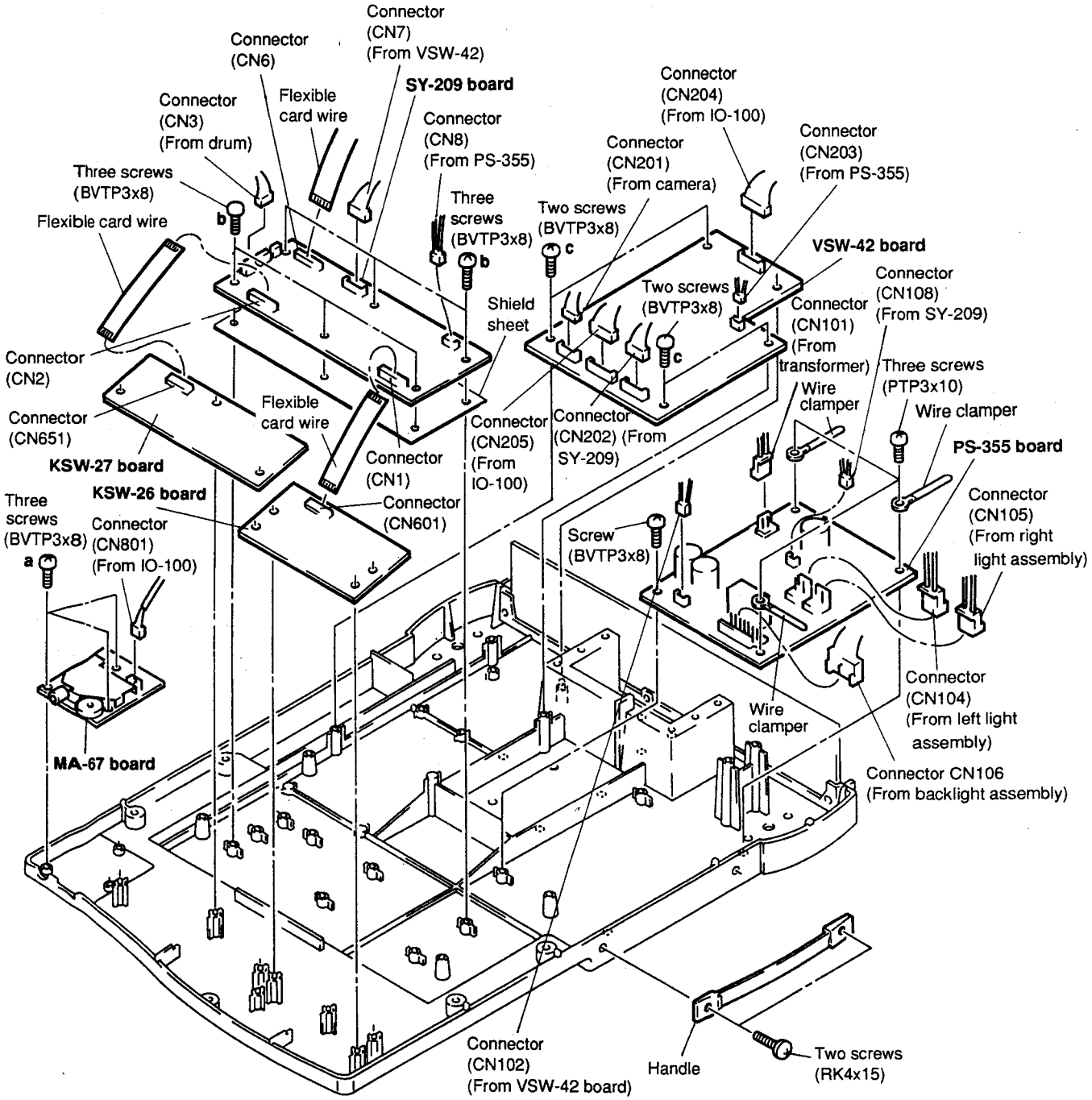
### 2-1-4. Removal of Left/Right Light Assemblies

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the two connectors (CN104 and CN105) on the PS-355 board.
4. Remove the screw **e** (PSW4X10), then remove the three ground terminals from the right light assembly.
5. Remove the two screws **f** (B4X6) and one screw **g** (B3X10) each fastening the left and right pipe support brackets, then remove the left and right light assemblies.



• The figure shown here is used in the following sections.

2-1-5. Removal of KSW-26/27 Board
2-1-6. Removal of MA-67 Board
2-1-7. Removal of SY-209 Board
2-1-8. Removal of PS-355 Board
2-1-9. Removal of VSW-42 Board



### 2-1-5. Removal of KSW-26/27 Board

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the flexible card wire on the connector (CN601), then remove the KSW-26 board.
4. Remove the ground wire from the pipe support bracket (R).
5. Disconnect the flexible card wire on the connector (CN651), then remove the KSW-27 board.

### 2-1-6. Removal of MA-67 Board

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the connector (CN801) on the MA-67 Board.
4. Remove the three screws **a** (BVTP3X8), then remove the MA-67 board.

### 2-1-7. Removal of SY-209 Board

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Remove the backlight assembly. (Refer to section 3-3.)
4. Disconnect the three connectors (CN3, 7 and 8) and three flexible card wires (CN1, 2 and 6) on the SY-209 board.
5. Remove the six screws **b** (BVTP3X6), then remove the SY209 board with shield sheet.

### 2-1-8. Removal of PS-355 Board

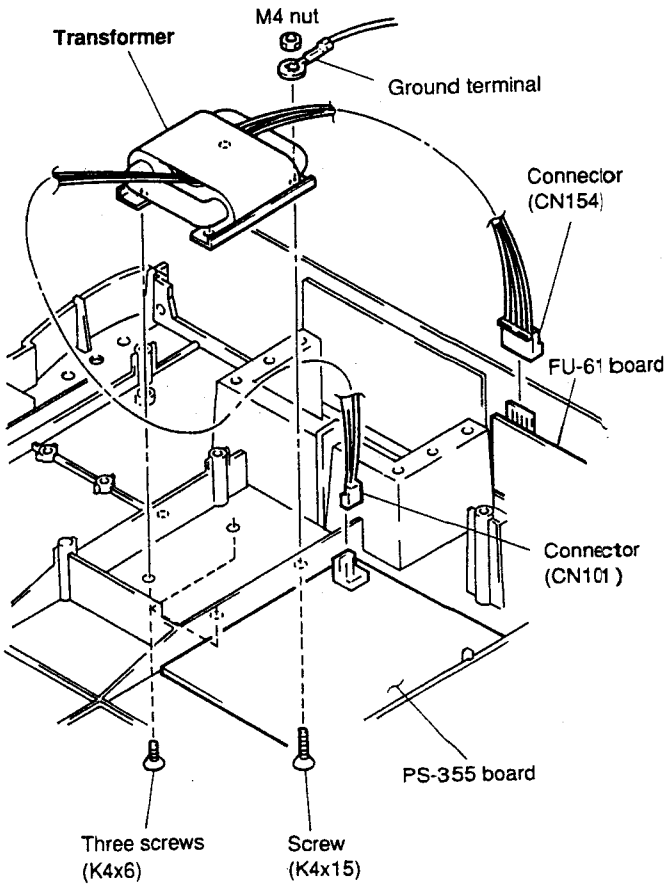
1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the six connectors (CN101, CN102, CN104, CN105, CN106, CN108) on the PS-355 board.
4. Remove the three screws (PTP3X10) and one screw (BVTP3X8), then remove the three wire clampers and PS-355 board.

### 2-1-9. Removal of VSW-42 Board

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the five connectors (CN201 to CN205) on the VSW-42 board.
4. Remove the four screws **c** (BVTP3X8), then remove the VSW-42 board.
5. Remove the ground wire (soldering) from the camera.

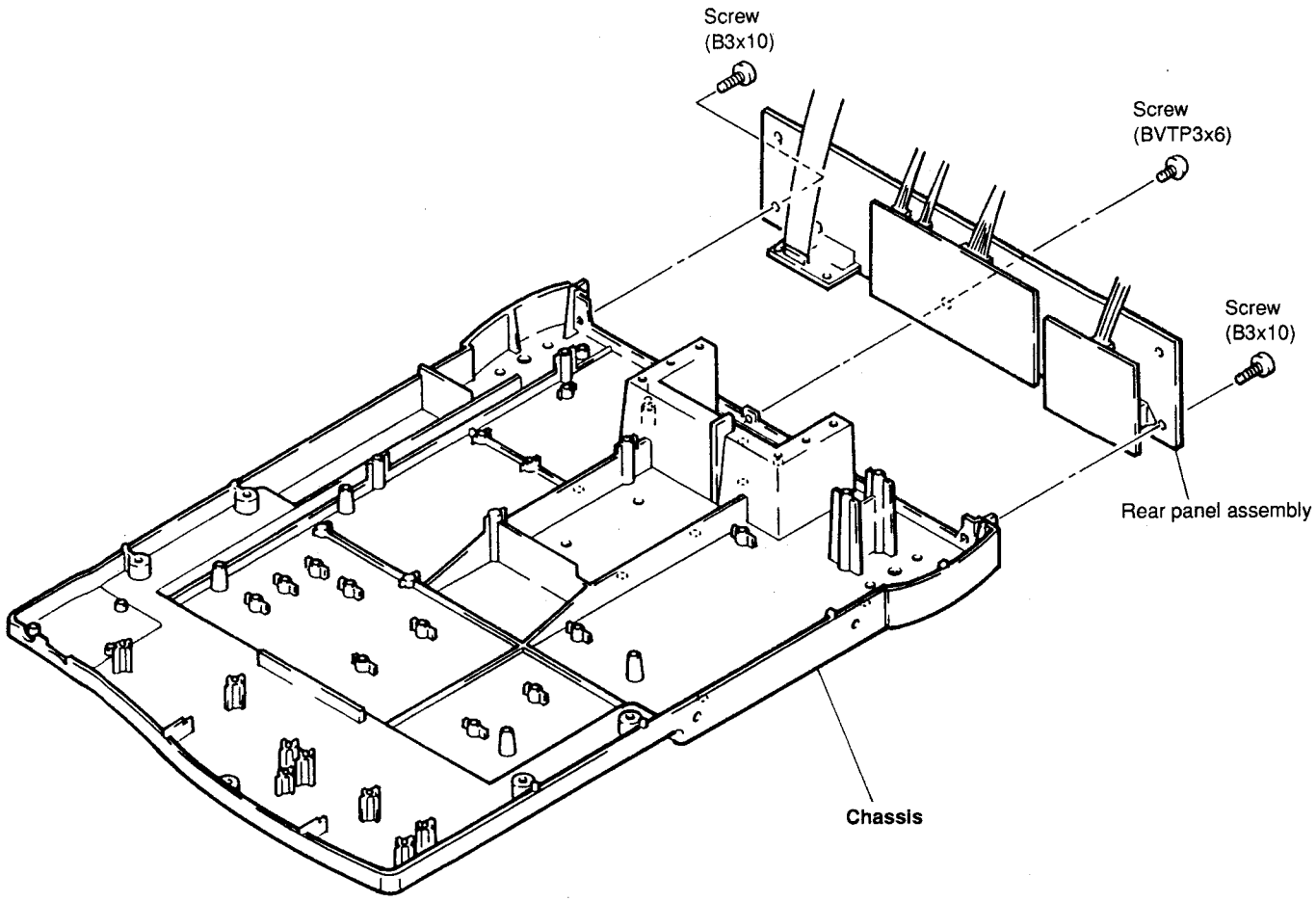
### 2-1-10. Removal of Transformer

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the connector (CN154) on the FU-61 board.
4. Remove the nut (M4) and screw (K4X15), then remove the ground terminal.
5. Disconnect the connector (CN101) on the PS-355 board.
6. Remove the 3 screws (K4X6), then remove the transformer.



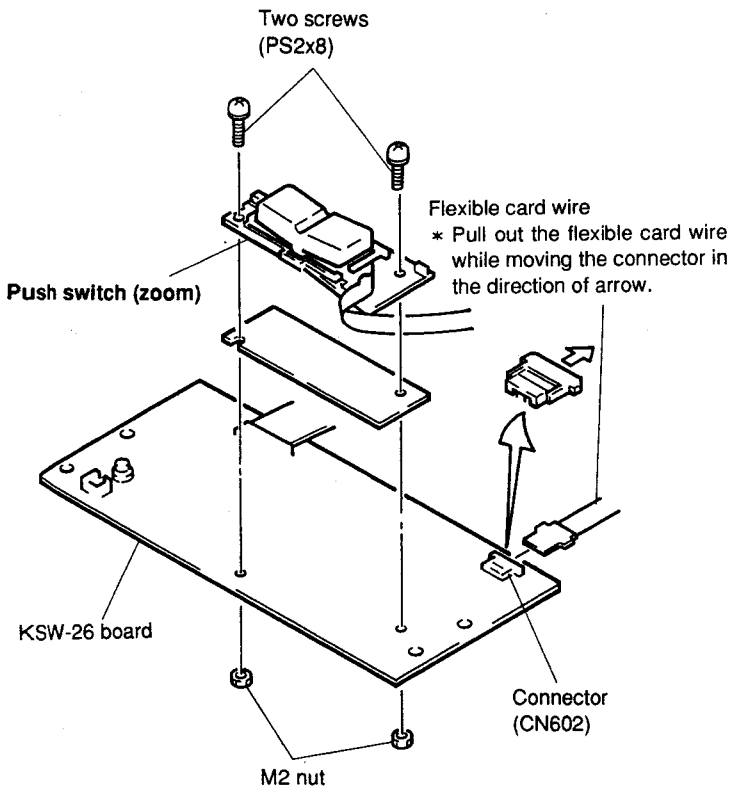
### 2-1-11. Removal of Chassis

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Perform sections 2-1-3 to 2-1-10, then remove the chassis.



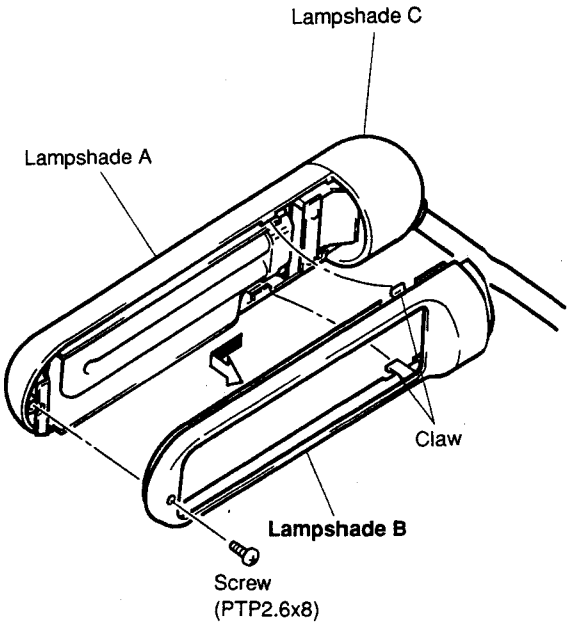
### 2-1-12. Removal of Push Switch (Zoom)

1. Remove the cover assembly. (Refer to section 2-1-1.)
2. Remove the table assembly. (Refer to section 2-1-2.)
3. Disconnect the flexible card wire from the connector (CN602) on the KSW-26 board.
4. Remove the two screws (PS2X8), then remove the push switch (zoom).



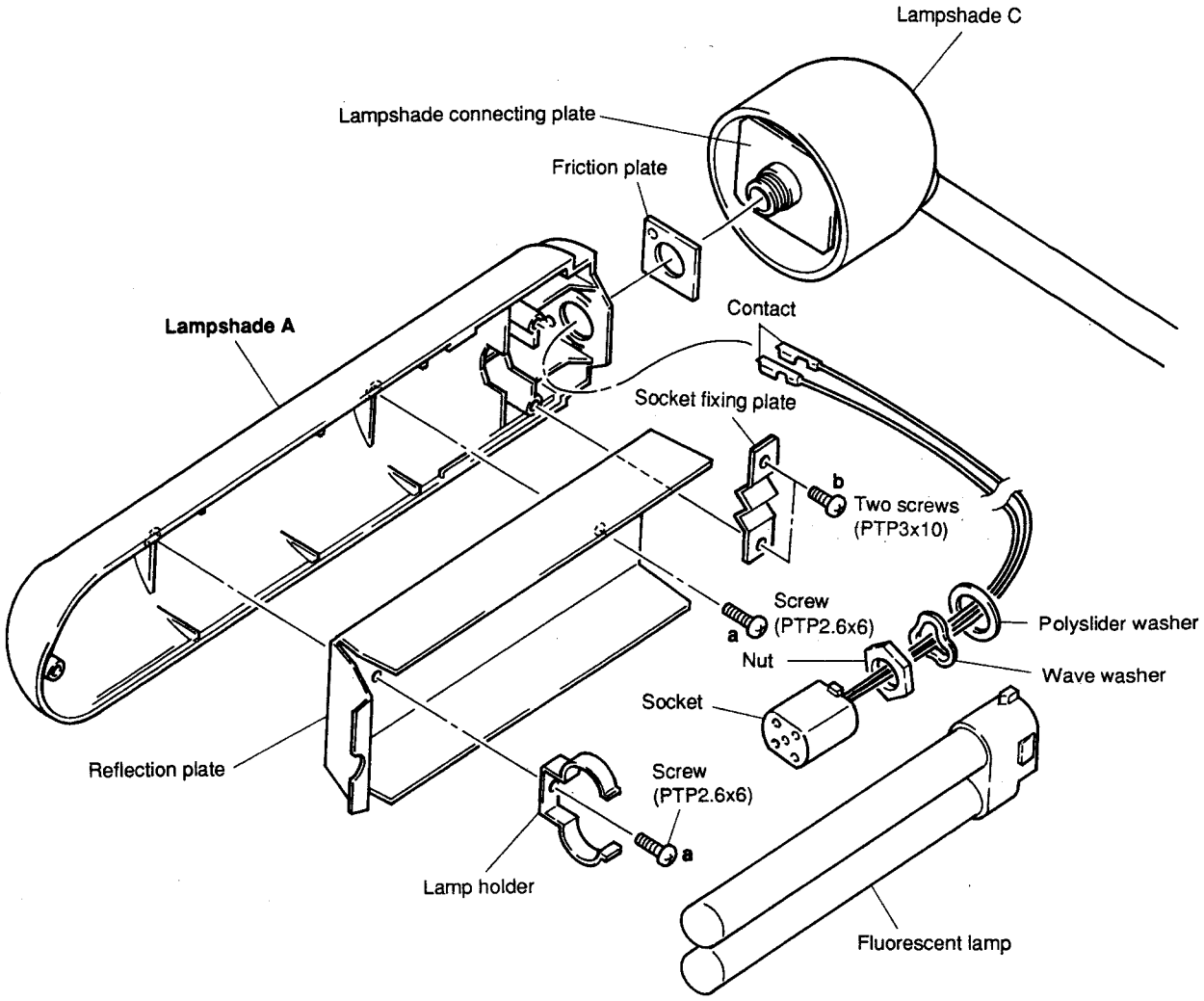

### 2-1-13. Removal of Lampshade B

1. Remove the screws (PTP2.6X8).
2. Move the lampshade B in the direction of arrow, then and remove it while releasing the lock of the claw.



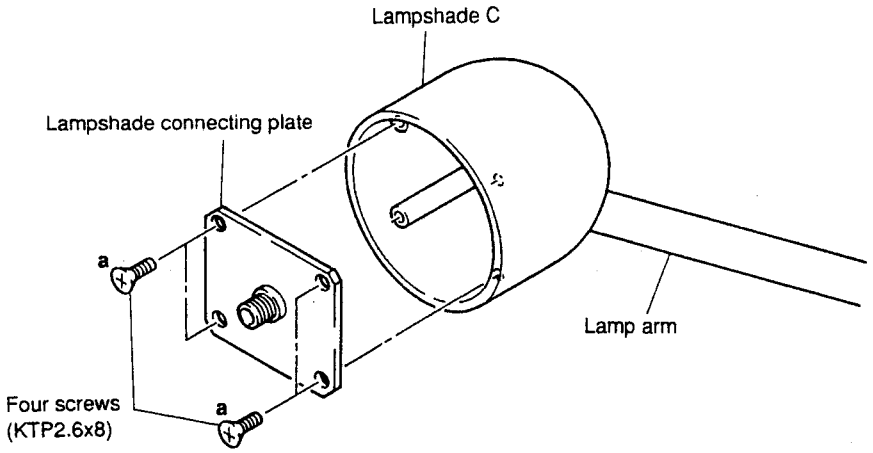
### 2-1-14. Removal of Lampshade A

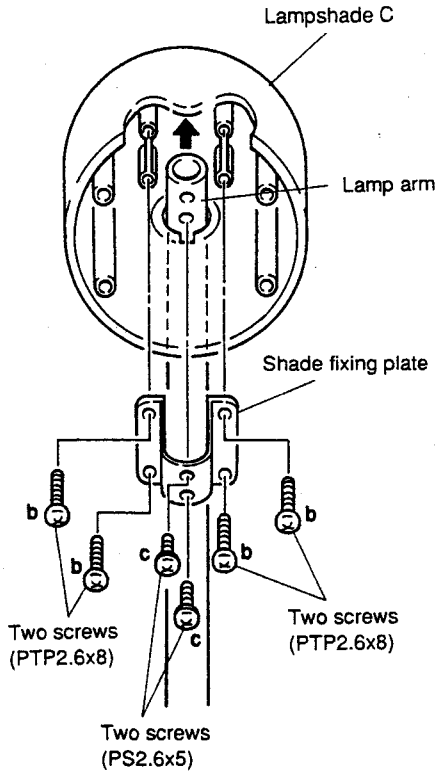
1. Remove the lampshade B. (Refer to section 2-1-13.)
2. Disconnect the connector (CN105) on the PS-355 board, then pull out the two contacts from the connector housing.
3. Disconnect the fluorescent lamp from the socket.
4. Remove the two screws **a** (PTP2.6X6), then remove the lamp holder and reflection plate.
5. Remove the two screws **b** (PTP3X10), then remove the socket fixing plate.
6. Pull out the socket.
7. Remove the nut, wave washer, polyslider washer and friction plate, then remove the lampshade A.

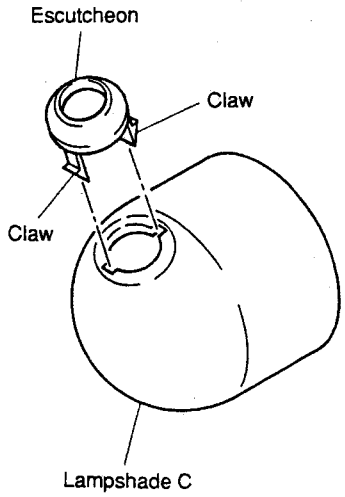


### 2-1-15. Removal of Lampshade C

1. Remove the lampshade B. (Refer to section 2-1-13.)
2. Remove the Lampshade A. (Refer to section 2-1-14.)
3. Remove the four screws **a** (KTP2.6X8), then remove the lampshade connecting plate.
4. Remove the four screws **b** (PTP2.6X8), then move the lamp arm in the direction of arrow.
5. Remove the two screws **c** (PS2.6X5). After removing the shade fixing plate, pull out the lamp arm.
6. Remove the two escutcheon claws, then remove the lampshade C.



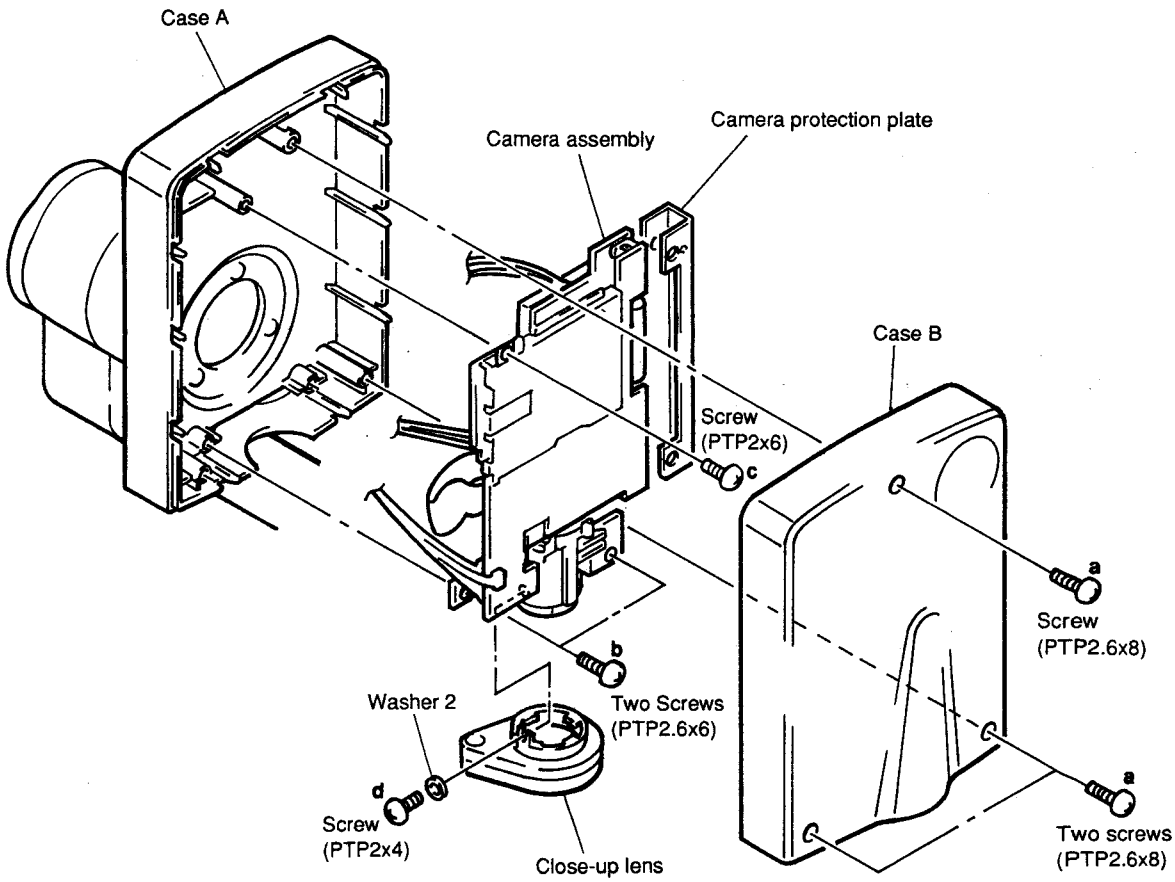
## 2-1-16. Replacing the Camera Assembly

When replacing the camera assembly (EVI-130/131), the data must be rewritten.
The main process is shown below.

Start
↓
Replace
↓
VC-130/130P board suffix number check
↓
F page data failure check
↓
Adjustment
↓
END

**[Removal]**

1. Remove the three screws **a** (PTP2.6X8), then remove the camera case (B).
2. Remove the two screws **b** (PTP2.6X6) and one screw **c** (PTP2X6), then remove the camera assembly.
3. Remove the camera protection plate.
4. Disconnect the five connectors (CN231, CN601, CN922, CN927, CN928) from the camera assembly.
5. Remove the screw **d** (PTP2X4 and the washer 2), then remove the close-up lens.



**[Check]**

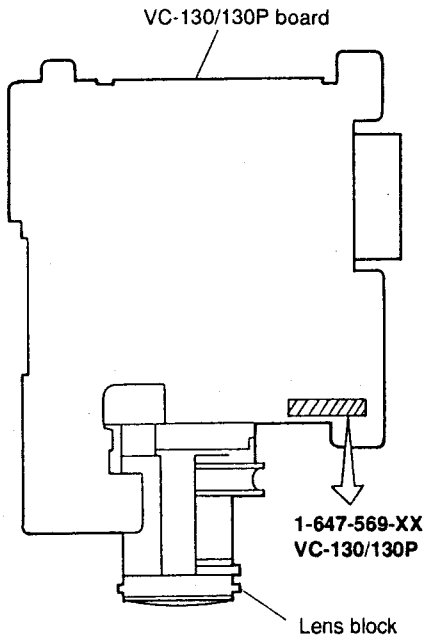
6. Check the suffix numbers of the VC-130/130P boards shown in the figure.

   The method of releasing the E-PROM write protect of the camera assembly (EVI-130/131) depends on the suffix number of the VC-130/130P board.

**[Board Suffix Number]**

-11/-21 : The write protect release switch (S001) is present.

-12/-22 : The write protect release switch (S001) is not present.

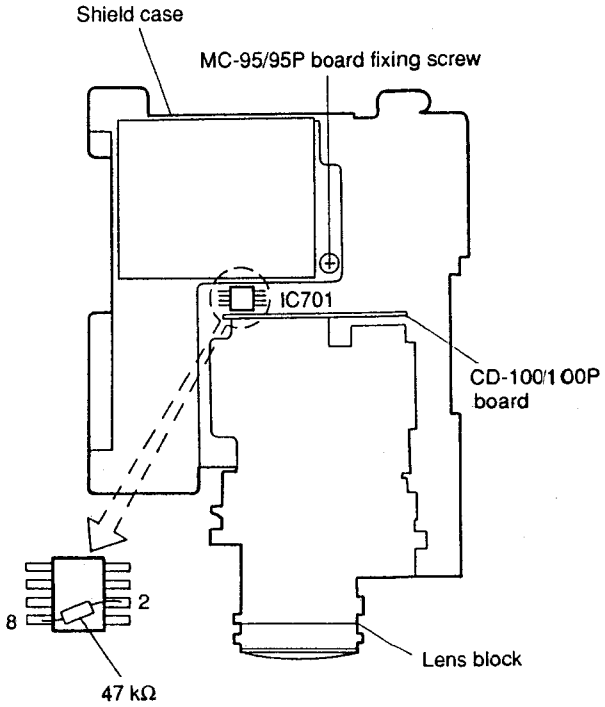



7. Check the F page data failure.

   This check applies to the suffix numbers -11 and -21 of the VC-130/130P board.
   This check is not required for the suffix numbers -12 and -22 of the VC-130/130P board.

**[Check Method]**

Check that there is a resistor (47 kΩ) between Pin 2 and Pin 8 of IC701 as shown in the figure.



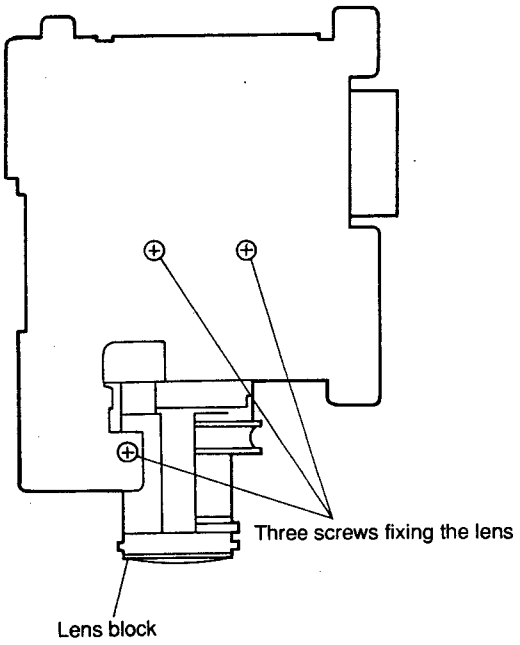

If a resistor (47 kΩ) is not present solder it in the following procedures.

**[Procedures]**

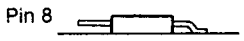
1) Remove the fixing screw of the MC-95/95P board shown in the figure above.

2) Remove the three fixing screws, then remove the lens block.

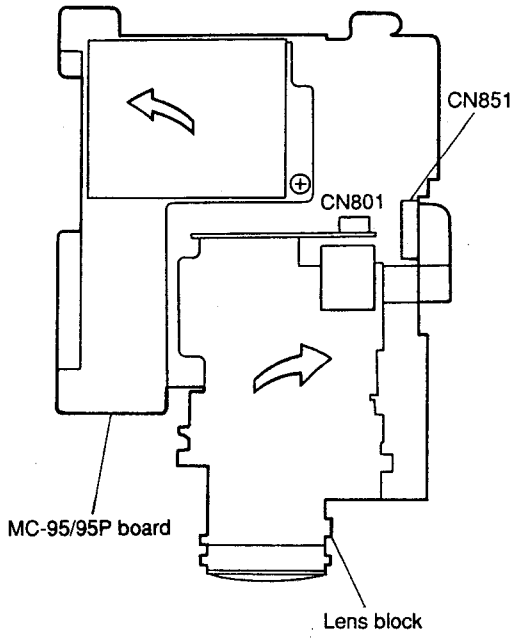
**Note :** Without burden the board, remove the three screws while holding the lens block.

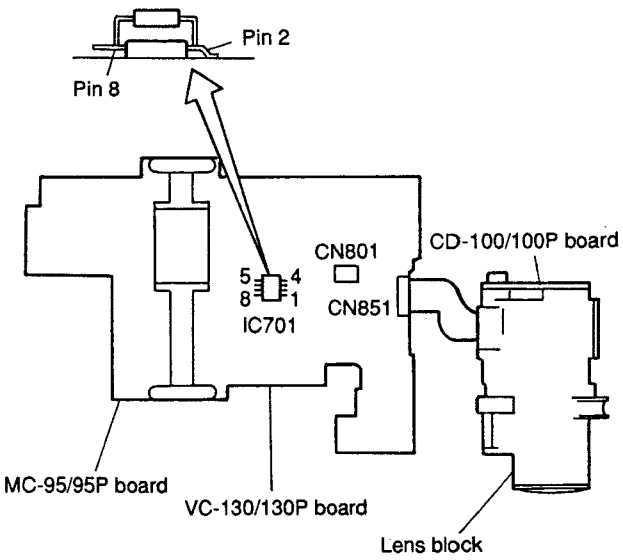



3) Disconnect the connector (CN801).
4) Remove the Pin 8 of IC701 as shown in the figure.



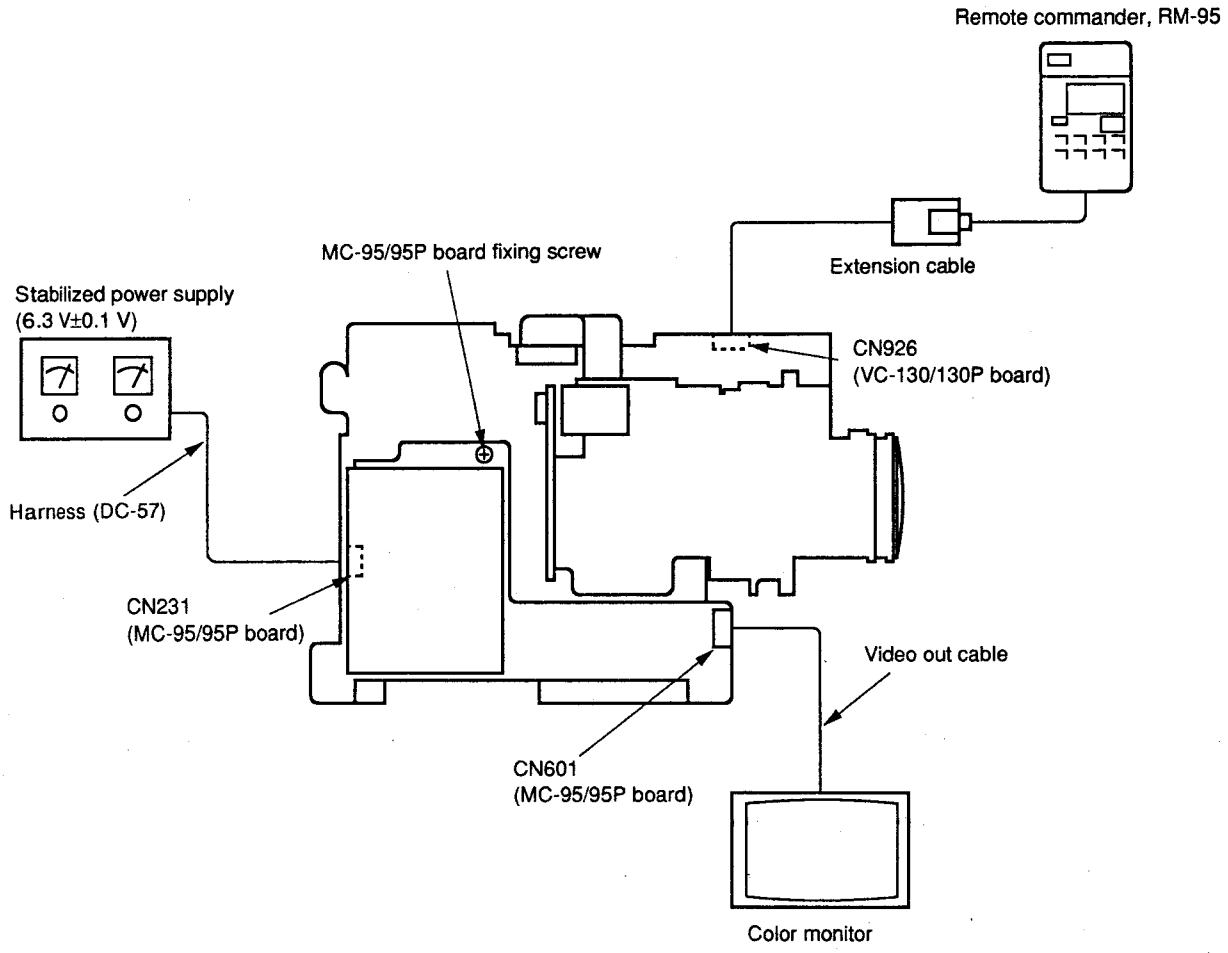

5) Solder a 47 kΩ (1-249-437-11) resistor between Pin 8 and Pin 2 of IC701.
6) After attaching the resistor, connect the connector (CN801) and attach the lens block.

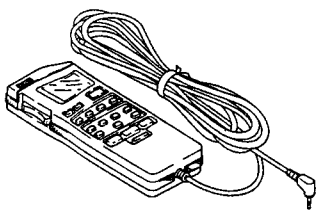


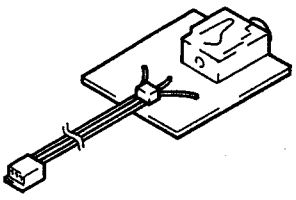
8. Camera Assembly Connection

This section describes the connection and the tools used to check/adjust the camera assembly.

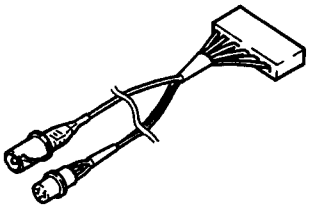


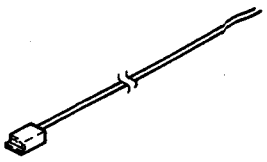
Remote commander, RM-95
(J-6082-053-B)



Extension cable
(J-6082-291-A)



Video out cable connector
(J-6082-293-A)



Harness (DC-57)
(1-951-473-11)

9. Adjusting Remote Commander

The camera section is adjusted by changing the constant or coefficient of the digital signal processing calculation, or modifying the output voltage of the EVR IC (VC-130/130P board IC705). This is controlled by the camera micro processor (VC-130/130P board IC702), which reads the data written in the nonvolatile memory (VC-130/130P board IC701: EEPROM), and transmits it to the digital signal processing circuit and EVR. To perform adjustments, adjustment data written in the nonvolatile memory must be rewritten, using the adjusting remote commander.

The adjusting remote commander uses the remote commander signal line (ECCP) to communicate mutually with the camera microprocessor. The page, address and the up/down commands of the data are transmitted from the adjusting remote commander to the camera micro processor. And, the page, address, and data are transmitted for the vice versa.

**[Using the adjusting remote commander]**

1) Connect the adjusting remote commander to the remote terminal.
2) Adjust the HOLD switch of the adjusting remote commander to "HOLD" (SERVICE position).
   If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 9-1.

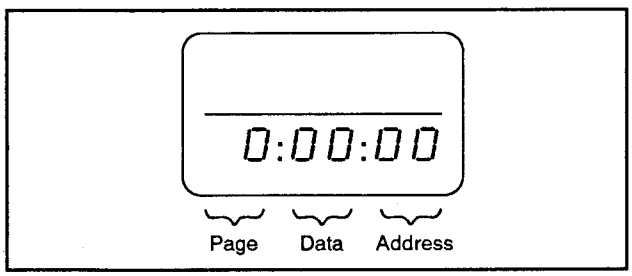



**Fig. 9-1.**

3) Operate the adjusting remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH + button is pressed, and decreases when the EDIT SEARCH – button is pressed. There are altogether 16 pages, from 0 to F.

| Hexadecimal notation | 0 1 2 3 4 5 6 7 8 9 A B C D E F |
|---|---|
| LCD Display | 0 1 2 3 4 5 6 7 8 9 A b c d E F |
| Decimal notation conversion value | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |

**Table. 9-1.**

   - Changing the address
     The address increases when the FF (►►) button is pressed, and decreases when the REW (◄◄) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (►) button is pressed, and decreases when the STOP (■) button is pressed.
     There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (F, E and D pages) in the nonvolatile memory. (The new adjustment data will not be recorded in the nonvolatile memory if this step is not performed.)

**[Precautions upon using the adjusting remote commander]**

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

**[Adjustment]**

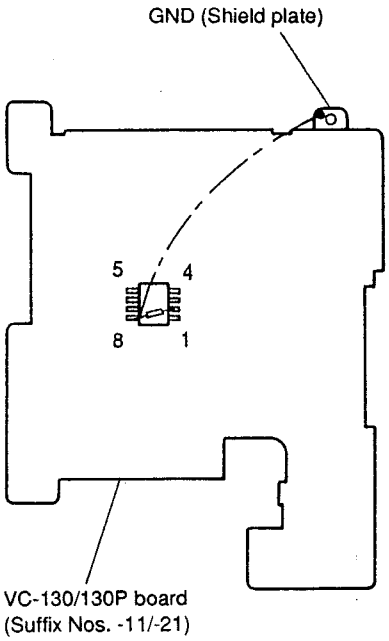
10. Check the microprocessor ROM version.
1) Check that the data satisfies the following specification using the remote commander for page : 6, address : 11 (H).
   Specification : Above 10 (H)
   (Not available to use less than 10 (H))

11. Release the write protect.

**For suffix numbers -11/-21 of VC-130/130P boards:**

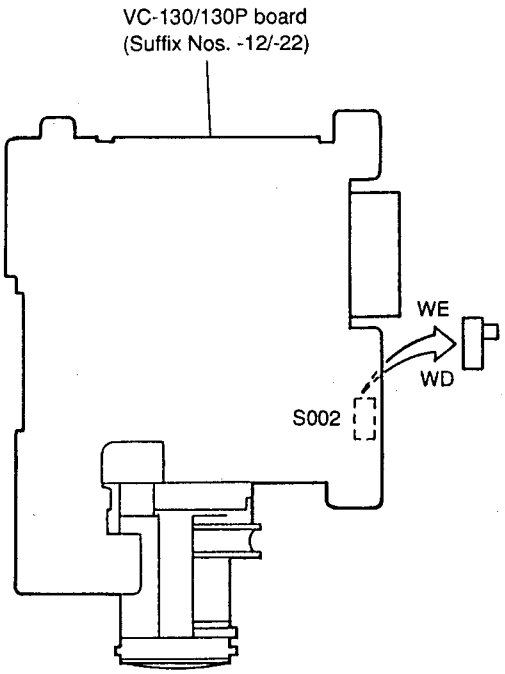
1) Remove the screws fixing the MC-95/95P board and open the MC-95/95P board.
2) Turn ON the power.
3) Connect Pin 8 of IC701 to the GND (shield sheet) using a alligator clip, etc.

**Note 1:** To prevent incorrect operations, connect the GND first.
**Note 2:** Be careful not to burden the resistor terminals and IC pins.




**For suffix numbers -12/-22 of VC-130/130P boards :**

1) Turn ON the power.
2) Set the switch (S002) on the VC-130/130P board to the WE side.



12. Release the write protect.
1) Change the data from 10 (H) to 01 (H) using the adjusting remote commander for page:6, address:00 (H).

13. Change the AE reference level setting.
1) Change the data from 16 (H) to 20 (H) using the adjusting remote commander for page:F (H), address:62 (H).
2) Press the PAUSE button of the adjusting remote commander.

14. Change the focus limiter setting.
1) Change the data from 05 (H) to 03 (H) using the adjusting remote commander for page:F (H), address:69 (H).
2) Press the PAUSE button of the adjusting remote commander.

15. Set the write protect switch.

**For suffix numbers -11/-21 of VC-130/130P boards:**

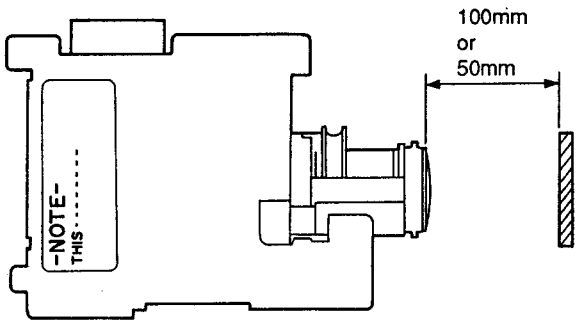
1) Remove the alligator clip connected at step 11.
2) Turn OFF the power supply.
   **Note:** Be sure to remove the alligator clip from the IC701 side.

**For suffix numbers -12/-22 of VC-130/130P boards:**

1) Return the switch (S002) on the VC-130/130P board changed at step 11 to the WD side.
2) Turn off the power supply.
   **Note:** To release the camera adjustment mode, be sure to turn OFF the power.

16. Check the focus limiter settings and changes.
1) Set the HOLD SW of the adjusting remote commander to NO.
2) Press the WIDE of the zoom lens until the image expands fully to the wide size.
3) Place the subject with characters, etc. written on it about 100mm away from the front of the lens and check that it is in focus.
4) Place the subject 50 mm away from the front of the lens and check that it is not in focus.

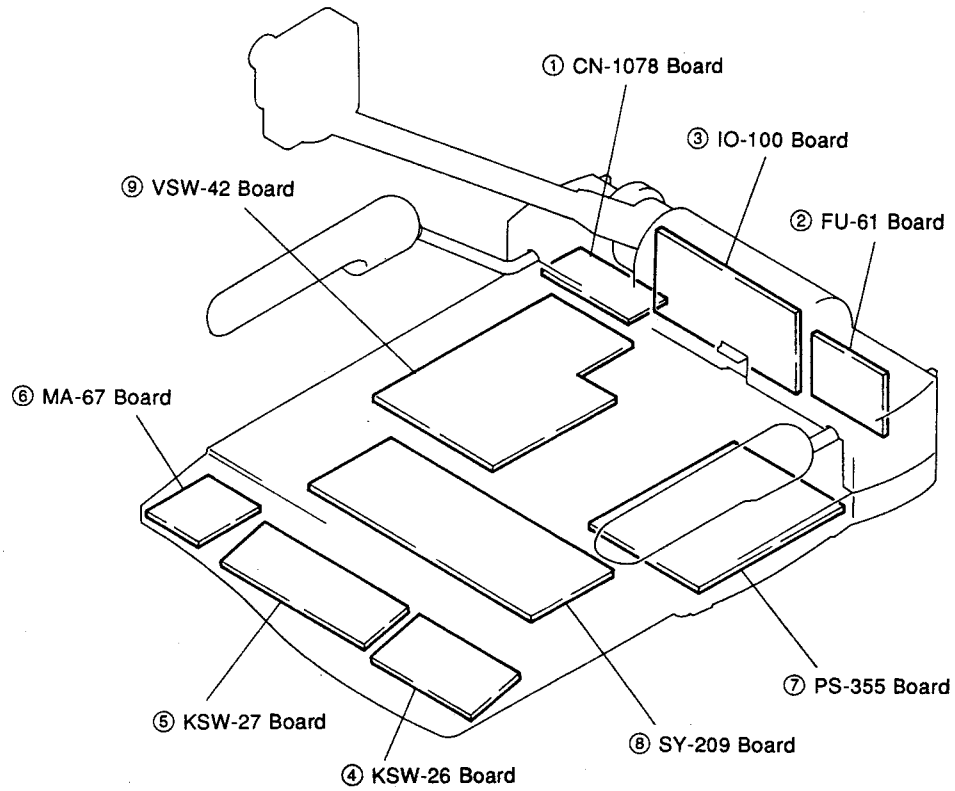
   **Note:** Check without the close-up lens, etc.




17. Paste the caution label.
   Paste the caution label that indicates that internal camera settings have been changed when adjustments have been completed. (SONY Part No.: 3-187-332-01)

- NOTE -
THIS CAMERA WAS CHANGED ITS SETTING FROM INITIAL CONDITION.
CF. VID-P100 SERVICE MANUAL.

## 2-2. BOARD LAYOUT




## 2-3. FUNCTION OUTLINE OF EACH BOARD

| BOARD | FUNCTION OUTLINE |
|---|---|
| CN-1078 | Connector |
| FU-61 | Fuse |
| IO-100 | Input/output |
| KSW-26 | Key switch |
| KSW-27 | Key switch |
| MA-67 | Mic amp |
| PS-355 | Power supply |
| SY-209 | System Control |
| VSW-42 | Video board |

## 2-4. Connectors and I/O Signals (VIDEO, AUDIO)

### I/O Signals of Connectors

**Inputs**

S video : 4-pin mini DIN X2
- Y : 1.0 Vp-p, 75 Ω, Negative sync
- C : 0.286 Vp-p, 75 Ω

Composite video : RCA pin X2
- 1.0 Vp-p, Negative sync

Audio : RCA pin X2 (Stereo)
- Input impedance 47 kΩ
- Input level –10 dB, Unbalanced

Microphone input : Standard jack X1
- Input impedance 3.3 kΩ (Conforms to 600 Ω microphone)
- Input level –60 dB, Unbalanced

**Outputs**

S video : 4-pin mini DIN X1
- Y : 1.0 Vp-p, 75 Ω, Negative sync
- C : 0.286 Vp-p, 75 Ω

Composite video : RCA pin X1
- 1.0 Vp-p, Negative sync

BNC pin X1
- 1.0 Vp-p, Negative sync

Audio : RCA pin X1 (Stereo)
- Output impedance 47 kΩ
- Output level –10 dB, Unbalanced

Power supply input X1

| | | |
|---|---|---|
| U | 120 V AC | 50/60Hz |
| EK | 230 V AC | 50/60 Hz |

AC outlet X1 (For, U destinations) Non-interlocked, Max. 300W

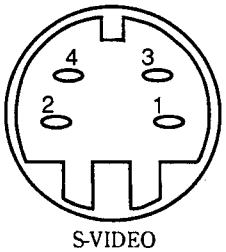
**Connectors**

| VID-P100 | Applicable connector/cable | |
|---|---|---|
| Used For | Name | Sony Parts No. |
| S VIDEO INPUT | YC-15 V (1.5 m) | Optional accessory |
| COMPOSITE VIDEO INPUT | PLUG, PHONO | 1-506-138-11 |
| AUDIO INPUT | PLUG, PHONO | 1-506-138-11 |
| MIC INPUT | STANDARD PLUG | 1-506-360-11 |
| S VIDEO OUTPUT | YC-15 V (1.5 m) | Optional accessory |
| COMPOSITE VIDEO OUTPUT | PLUG, PHONO | 1-506-138-11 |
| | BNC, MALE | 1-560-069-11 |
| AUDIO OUTPUT | PLUG, PHONO | 1-506-138-11 |

S-VIDEO

| Pin No. | Input/output signal |
|---|---|
| 1 | Y (G) |
| 2 | C (G) |
| 3 | Y (X) |
| 4 | C (X) |

<external view>




S-VIDEO

## 2-5. NOTE ON SPARE PARTS

### 2-5-1. Notes on spare parts

**(1) Safety Related Components Warning**

Components marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.

Replace these components with Sony parts whose parts numbers appear in this manual or service bulletins and in service manual supplements published by Sony.

**(2) Standardization of Parts**

Spare Parts supplied from Sony Parts Center may not be always identical with the parts which actually in use due to accommodating improved parts and/or engineering changes or standardization of genuine parts.

This manual's exproded views and electrical spare parts list indicate the parts numbers of the standardized genuine parts at present.

**(3) Stocked of Parts**

parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

**(4) Units of Capacitors, and Resistors**

The following units are assumed in schematic diagrams, electrical part lists and exploded views unless otherwise specified ;

Capacitor : μF

Resister : Ω

### 2-5-2. Replacement of Flexible Card Wires

The following flexible card wires are used on this unit. When handling a flexible card wire, be very careful not to bend it because this will remarkedly reduce its life.

| Connection | Number of Pin | Number of Flexible Card Wire |
|---|---|---|
| SY-209 Board KSW-26 Board | 16P | 1pc |
| SY-209 Board KSW-27 Board | 20P | 1pc |
| SY-209 Board CN-1078 Board | 16P | 1pc |
| KSW-26 Board Zoom switch | 5P | 1pc |

**<ZIF Type>**

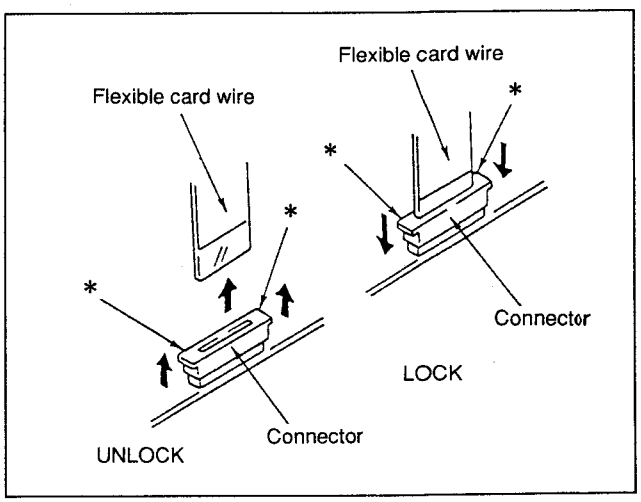
Disconnecting procedure

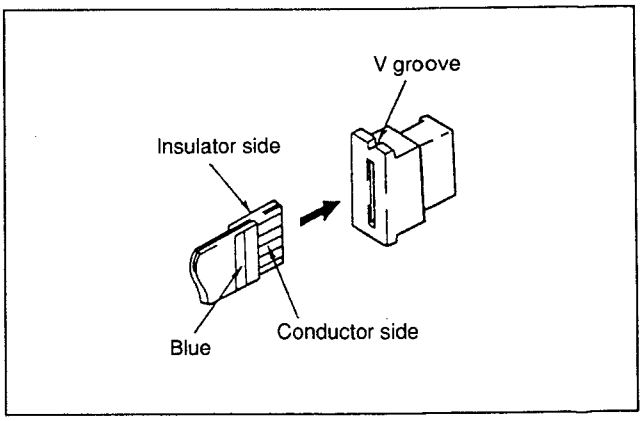
Pull up the * marked points of connector, then pull out the flexible card wire from the connector.

Installing procedure

Install the flexible card wire as far as it will go (up to the line indicated on the flexible card wire), then push down the * marked points of connector.

* In case the connector doesn't have the lock structure, install and disconnect the above procedures.




**Note:**

The flexible card wire consists of the conductor side and insulator side.

Connect the flexible card wire after checking the figure. If it is not properly connected, the circuit will not work.

## 2-6. CAMERA ASSEMBLY

Refer to the service manual of EVI-130/131 with regard to the camera assembly in detail.

# SECTION 3
# ALIGNMENT

## 3-1. Electrical Adjustment

### 3-1-1. Equipment Required

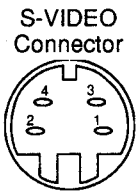
- Oscilloscope (Tektronix 2445B/150MHz or equivalent)
- Vector Scope (Tektronix 520A or equivalent for NTSC model)
- Vector Scope (Tektronix 521A or equivalent for PAL model)
- Multiformat Signal Generator (Tektronix TSG-130 with S-VIDEO OUT for NTSC model)
- Multiformat Signal Generator (Tektronix TSG-131 with S-VIDEO OUT for PAL model)
- Monitor TV
- S-VIDEO signal cable
- BNC-BNC cable
- BNC-PIN cable

### 3-1-2. Preparations and Notes on Alignment

Making the S-VIDEO signal cable

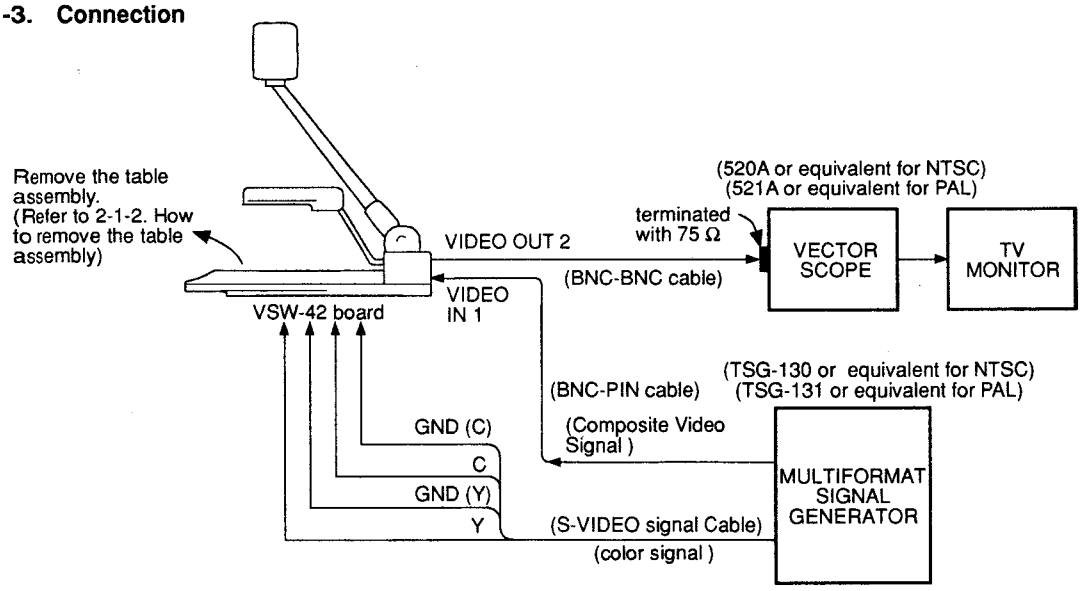
**Preparation** : S-S video cable about 5 meters in length (standard product)
Alligator Clips 4pcs

**Making the cable** : 1. Cut the cable in half.
2. Cut the cable integument with a cutter.
3. Strip the cover of the shield wire with a nipper.
4. Check the Y/C core wire with a tester.
5. Connect alligator clips to each core wires.



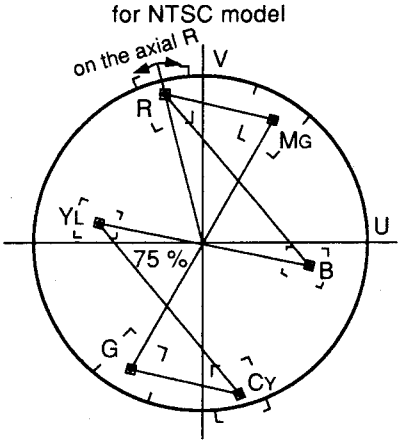
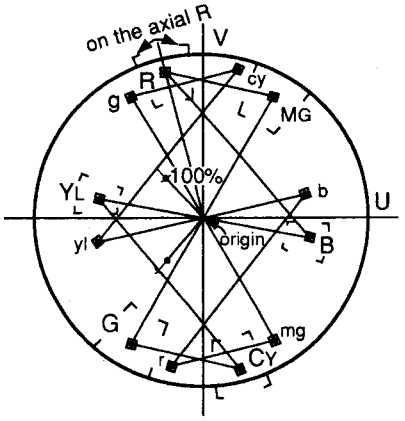

1 GND (Y)
2 GND (C)
3 Y
4 C

### 3-1-3. Connection

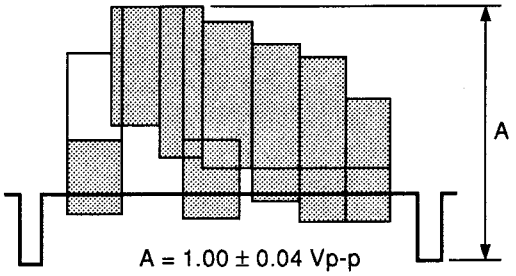
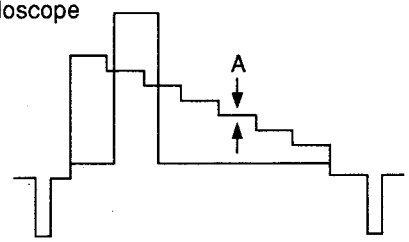



- Connect C signal from the signal generator to R201/VSW-42 board (J-6) on CN201-2pin side.
- Connect GND (C) signal from the signal generator to R201/VSW-42 board (J-6) on CN201-1pin side.
- Connect Y signal from the signal generator to R221/VSW-42 board (J-5) on CN201-4pin side.
- Connect GND (Y) signal from the signal generator to R221/VSW-42 board (J-5) on CN201-3pin side.

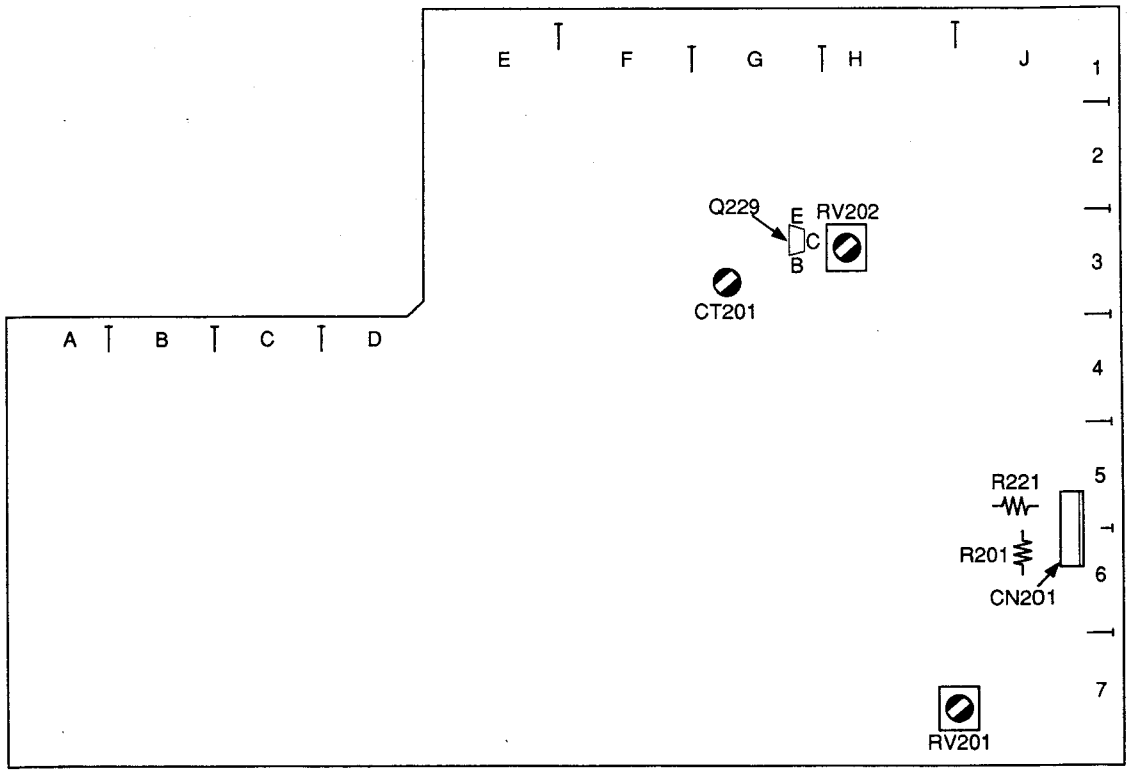
### 3-1-4. Negative • Positive Invert Phase Adjustment

| Preparations for adjustment | Specifications | Adjustment |
|---|---|---|
| • Disconnect the CN201/VSW-42 board (J-6).<br>• Refer to 3-1-3. connection and connect S-VIDEO signal cable to VSW-42 board.<br>• Turn the POWER switch ON.<br>• Confirm the VID lamp of VIDEO OUT button on the operation panel lights.<br>• Press the negative button on the operation panel, make the lamp light up.<br><br>• After adjustment is completed, disconnect the S-VIDEO signal cable and connect the CN201.<br>• Turn the POWER switch OFF. | VIDEO OUT 2 connector (terminated with 75Ω)<br>Vectorscope<br>for NTSC model<br>  <br><br>RED bright spots are on the axial R ± 3°<br><br>for PAL model<br>  <br><br>RED bright spots are on the axial R ± 3° | RV201/VSW-42 (H-7) |

### 3-1-5. Y/C Separation Adjustment

| Preparations for adjustment | Specifications | Adjustment |
|---|---|---|
| • VIDEO IN 1 : color bar signal<br>• Turn the POWER switch ON.<br>• Press the VIDEO 1 button of the VIDEO OUT button on the operation panel, make the lamp light up. | Step 1<br>Emitter of Q229/VSW-42 (G-3)<br>Oscilloscope<br>  <br><br>A = 1.00 ± 0.04 Vp-p | RV202/VSW-42 (H-3) |
| | Step 2<br>Emitter of Q229/VSW-42 (G-3)<br>Oscilloscope<br>  <br><br>Minimize the A level(chroma).<br>(A ≦ 50 mV) | CT201/VSW-42 (G-3) |

### 3-1-6. Adjustment Parts Location of VSW-42 Board



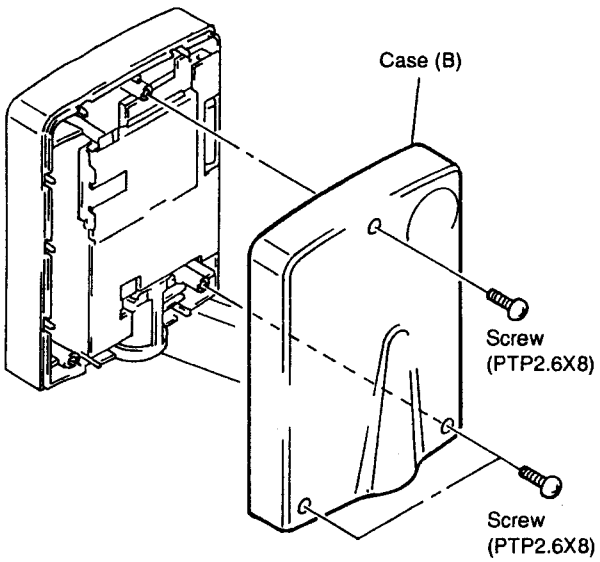
## 3-2. Mechanism Adjustment (Monitor Lens Optic Axis Adjustment)

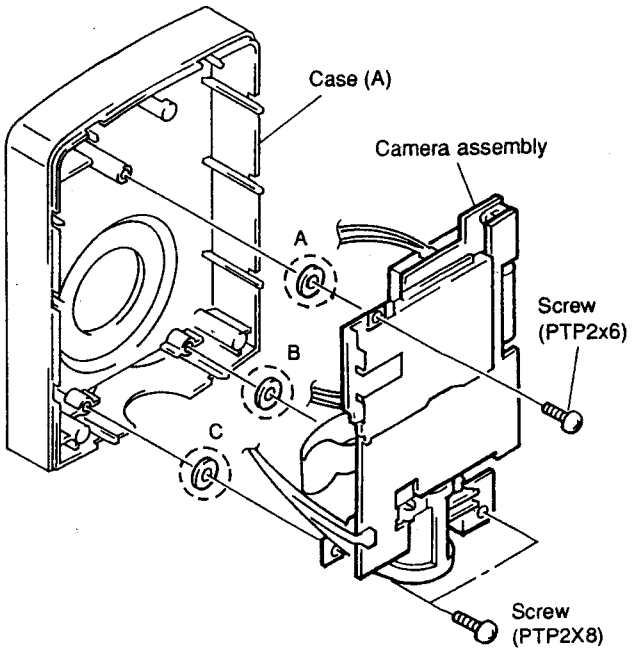
The monitor lens optic axis adjustment procedure is as follows.

1. Set the camera to WIDE and check that when the monitor is displayed, the left and rights sides of the backlight frame on the table are equal.

<u>If the backlight frame is not equaled:</u>

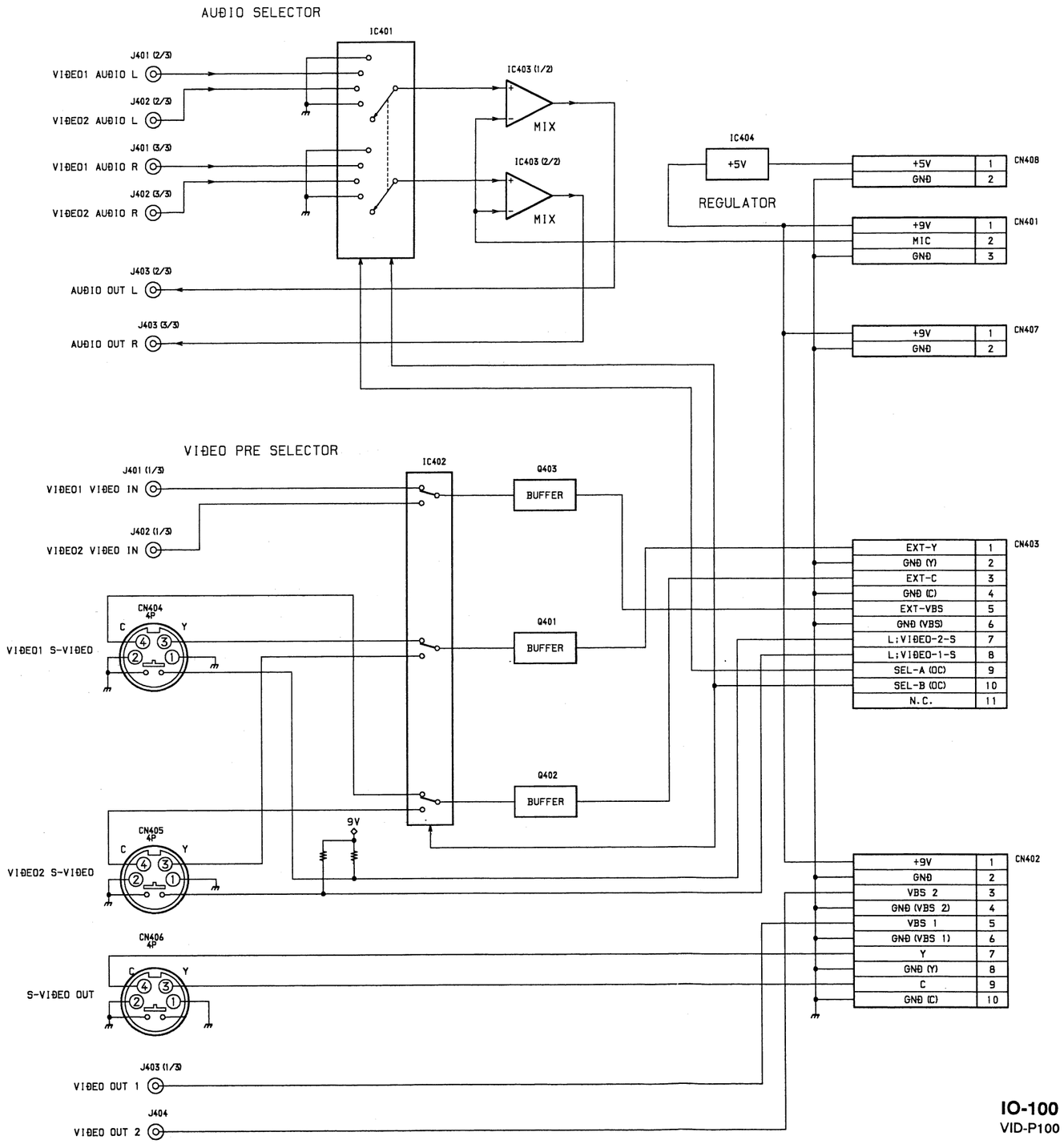
2. Remove the three screws (PTP2.6X8), then remove the case (B) as shown in the following figure.
3. Remove the two screws (PTP2X8) and one screw (PTP2X6), then remove the camera assembly.
4. If the backlight frame on the table is inclined to the right : Insert a washer at A (PTP2X6) shown in the figure as required and adjust so that the sides become equal.
5. If the backlight frame on the table is inclined to the left : Insert a washer at B and C (PTP2X8) shown in the figure as required and adjust so that the sides become equal.



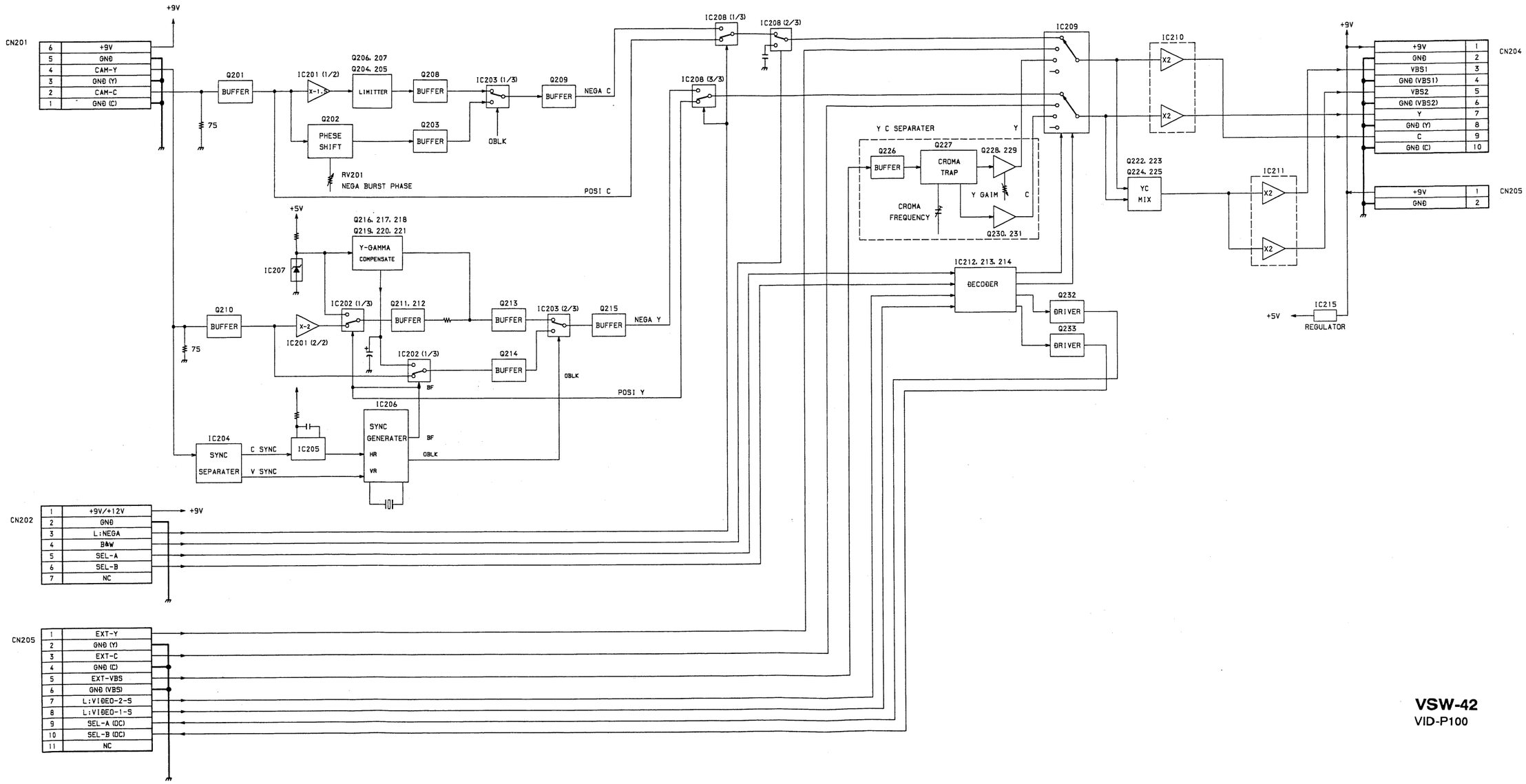
# SECTION 4
# BLOCK DIAGRAMS

**IO-100 BLOCK DIAGRAM**
**INPUT/OUTPUT BOARD**



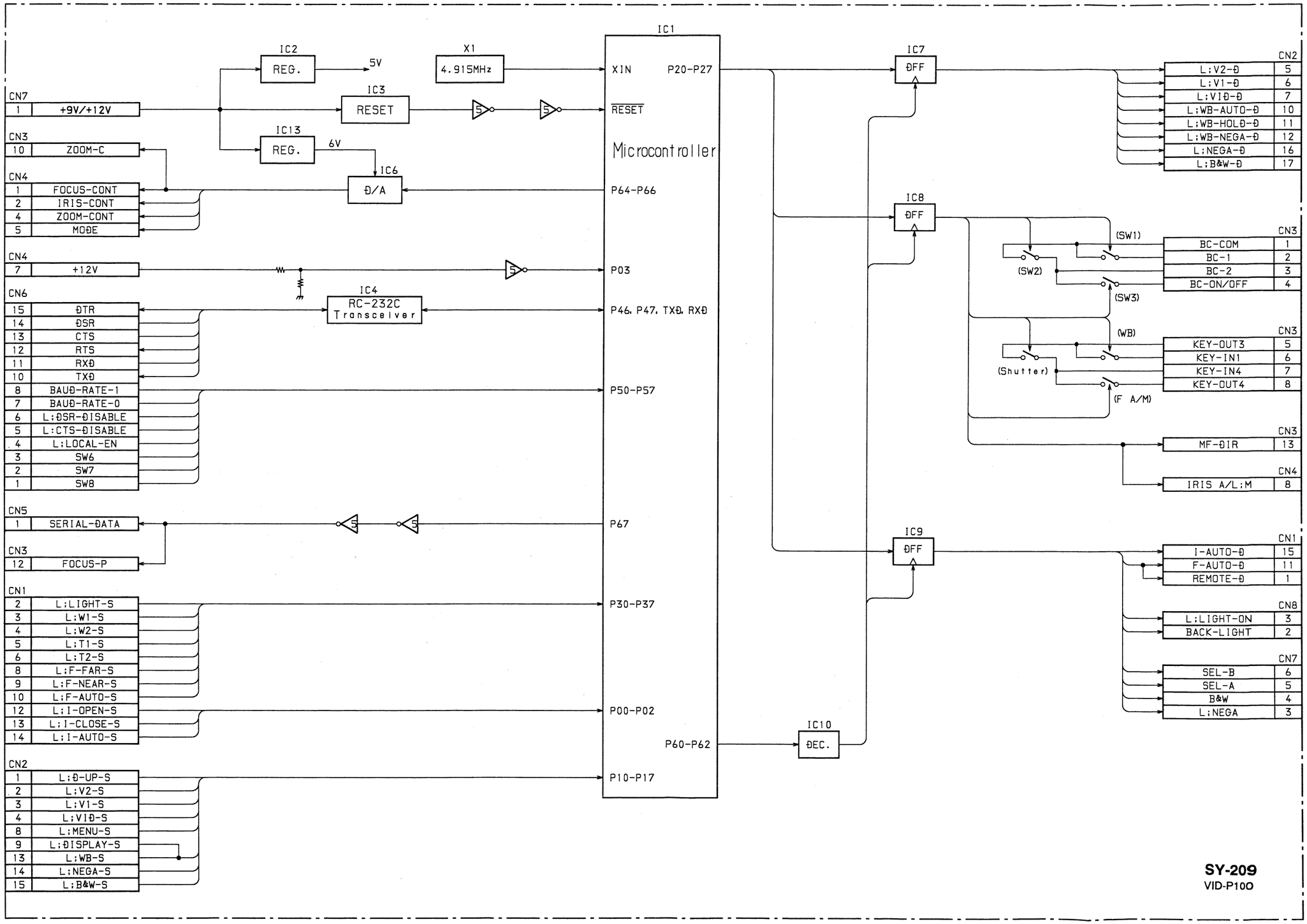

**IO-100**
VID-P100

## VSW-42 BLOCK DIAGRAM
## VIDEO BOARD

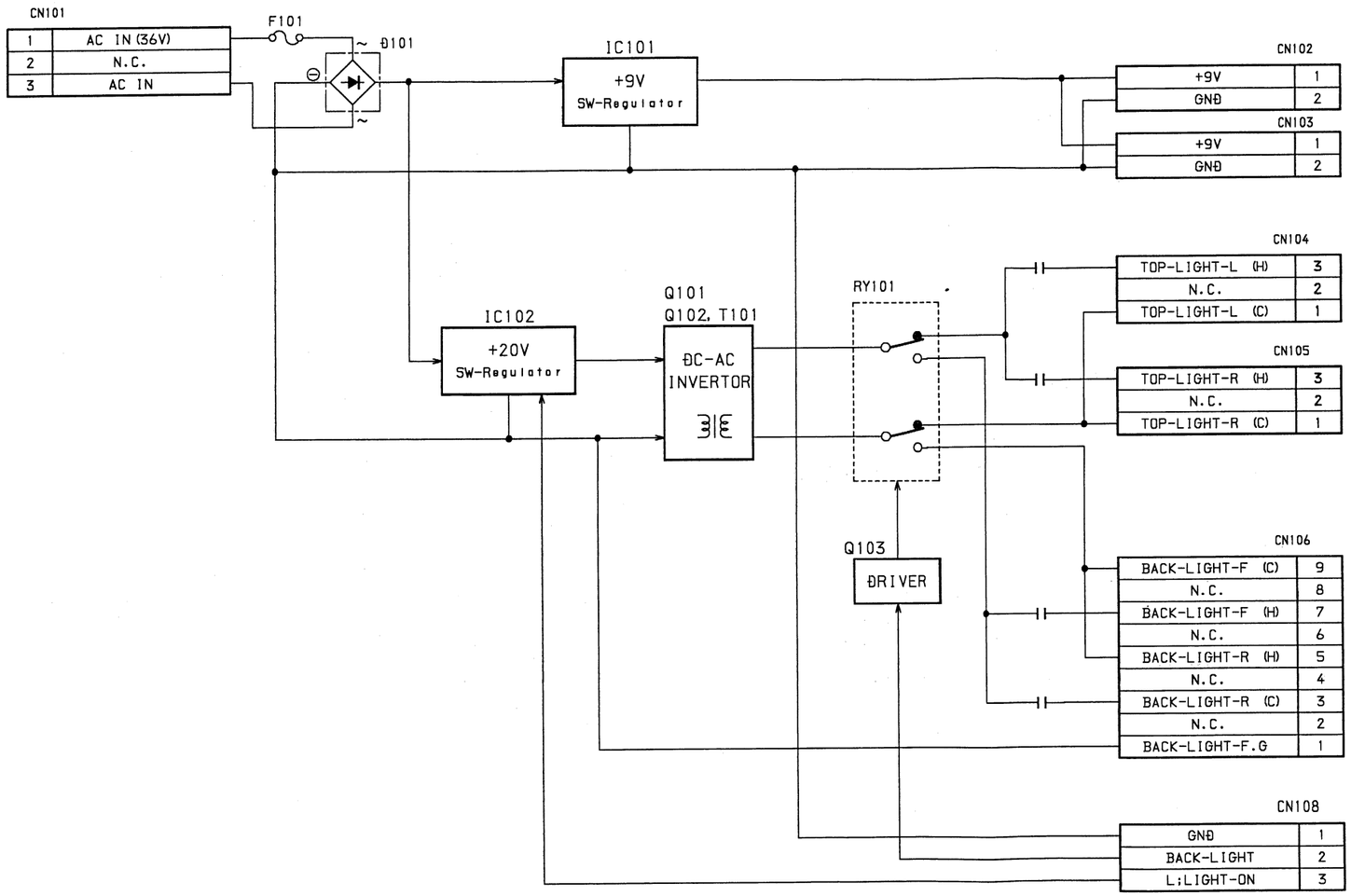



**VSW-42**
VID-P100

## SY-209 BLOCK DIAGRAM
## SYSTEM CONTROL BOARD



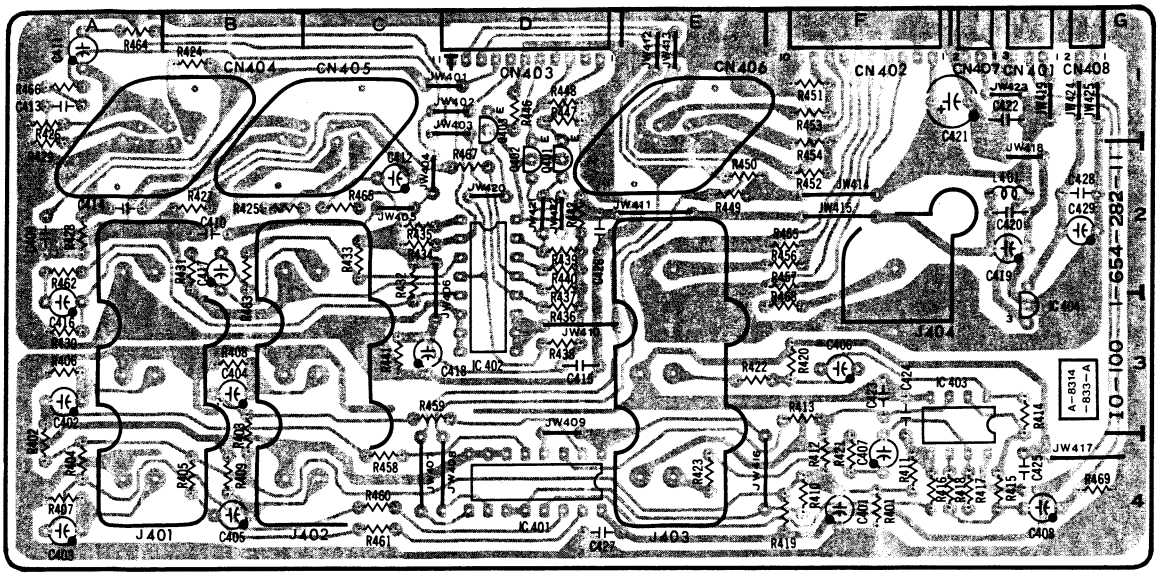
## PS-355 BLOCK DIAGRAM
## POWER BOARD




**PS-355**
VID-P100

# SECTION 5
# SCHEMATIC DIAGRAMS AND BOARD LAYOUTS

## IO-100; INPUT/OUTPUT BOARD




**IO-100** – COMPONENT SIDE –
1-654-282-11
VID-P100

IO-100 1-654-282-11

CN401 G-1
CN402 F-1
CN403 D-1
CN404 B-1
CN405 C-1
CN406 E-1
CN407 G-1
CN408 G-1

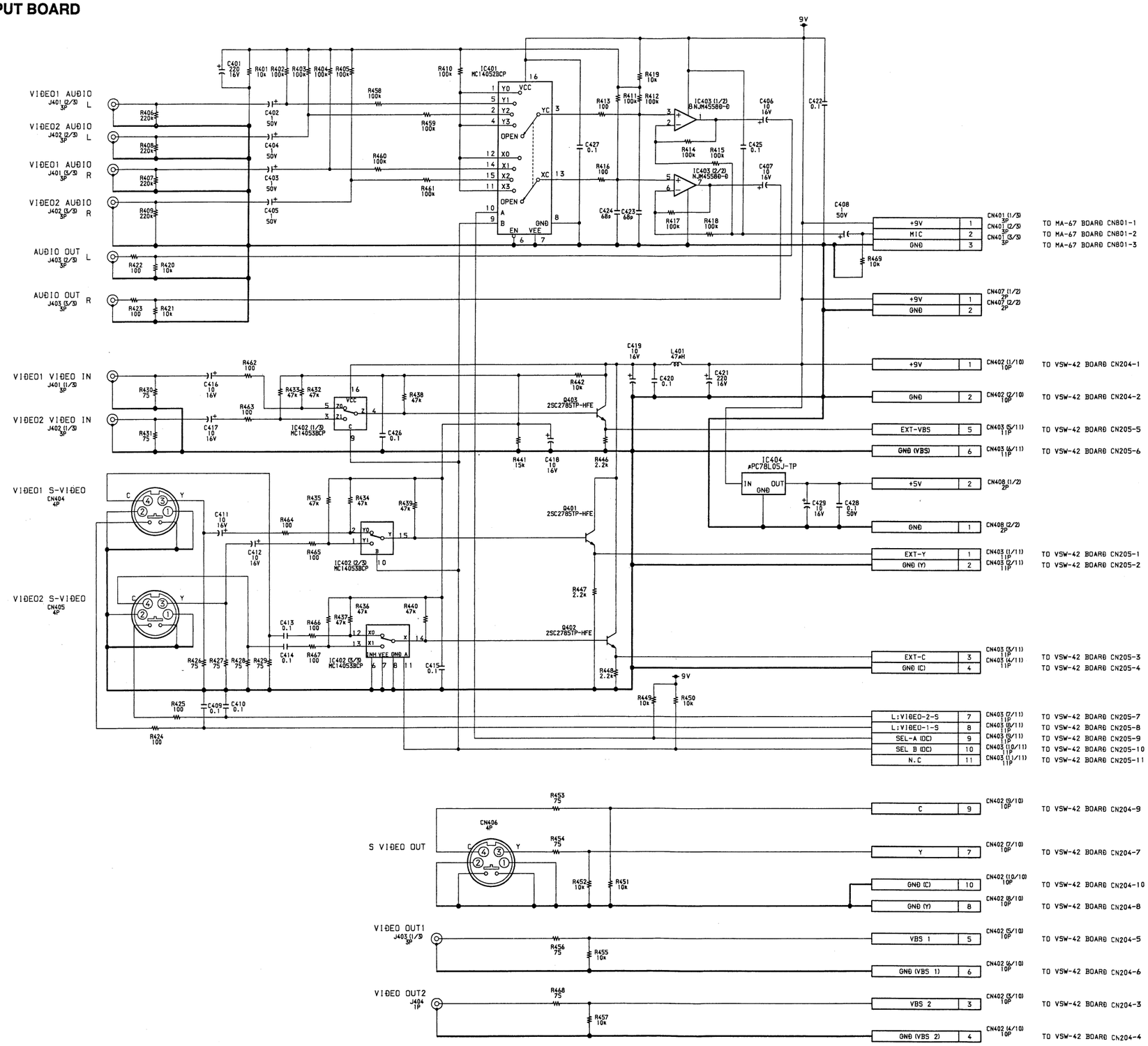
IC401 D-4
IC402 D-3
IC403 F-3
IC404 G-3

J401 A-4
J402 B-4
J403 E-4
J404 F-3

Q401 D-2
Q402 D2
Q403 D-1

* Soldering Side

## IO-100; INPUT/OUTPUT BOARD



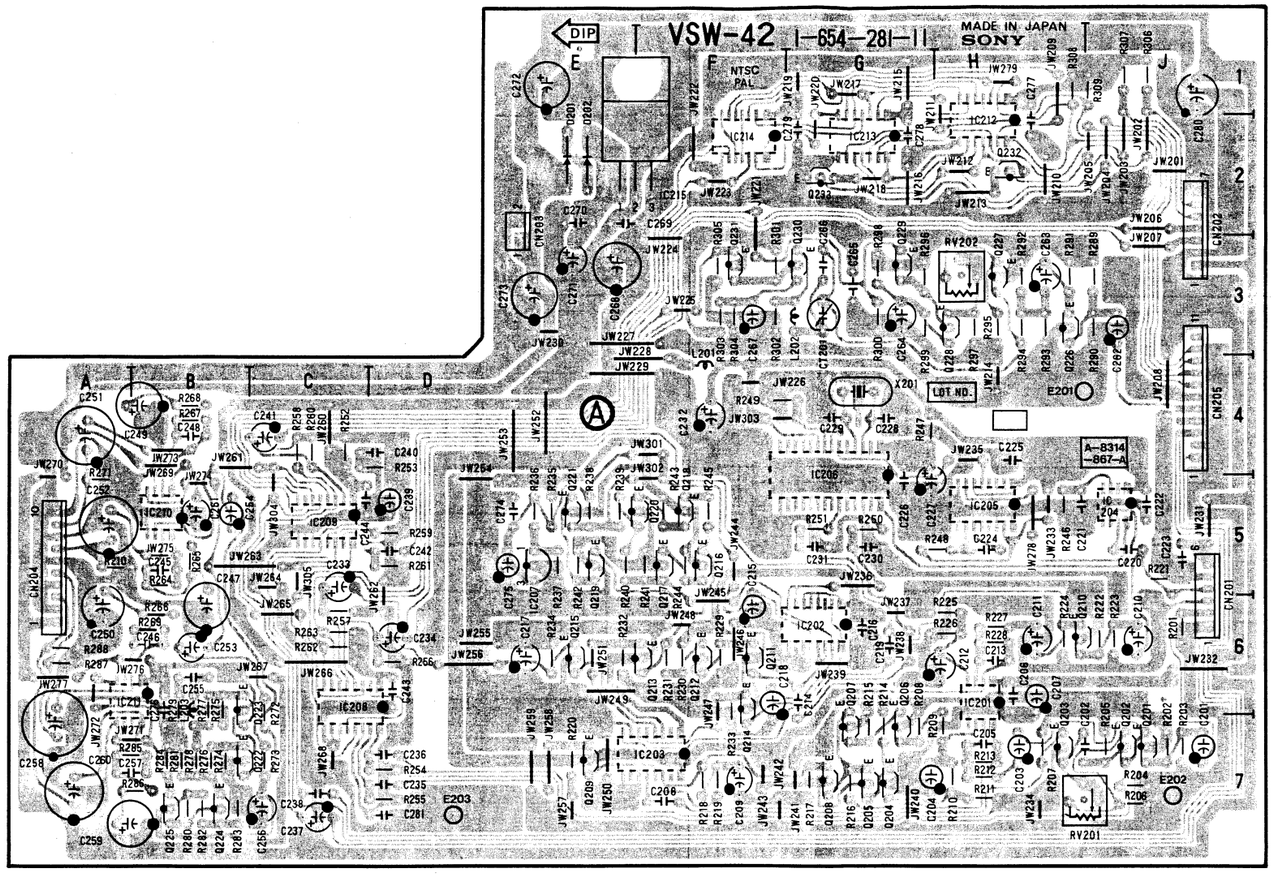
## VSW-42; VIDEO BOARD

VSW-42 1-654-281-11

| | | | |
|---|---|---|---|
| CN201 | J-6 | Q225 | B-7 |
| CN202 | J-2 | Q226 | H-4 |
| CN203 | E-3 | Q227 | H-3 |
| CN204 | A-6 | Q228 | H-4 |
| CN205 | J-4 | Q229 | G-3 |
| | | Q230 | G-3 |
| CT201 | G-4 | Q231 | F-3 |
| | | Q232 | H-2 |
| D201 | E-2 | Q233 | G-2 |
| D202 | E-2 | | |
| | | RV201 | H-7 |
| E201 | H-4 | RV202 | H-3 |
| E202 | J-7 | | |
| E203 | D-7 | X201 | G-4 |

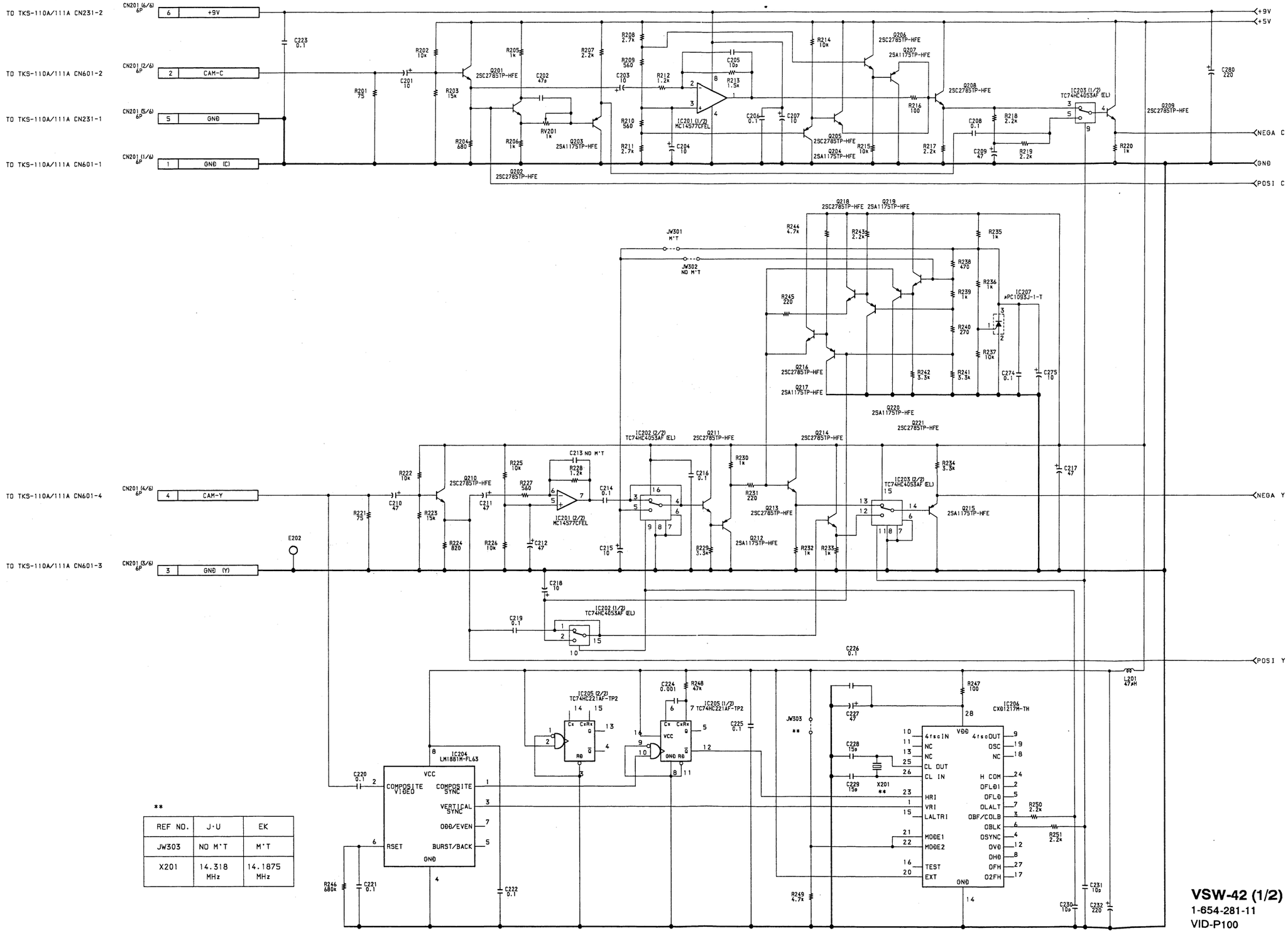
*IC201 H-6 * Soldering Side
*IC202 G-6
*IC203 F-7
*IC204 J-5
*IC205 H-5
*IC206 G-5
IC207 E-6
*IC208 C-6
*IC209 C-5
*IC210 B-5
*IC211 A-6
*IC212 H-2
*IC213 G-2
*IC214 F-2
IC215 F-2

Q201 J-7
Q202 J-7
Q203 H-7
Q204 G-7
Q205 G-7
Q206 G-6
Q207 G-6
Q208 G-7
Q209 E-7
Q210 H-6
Q211 F-6
Q212 F-6
Q213 F-6
Q214 F-7
Q215 E-6
Q216 F-5
Q217 F-6
Q218 F-5
Q219 E-6
Q220 F-5
Q221 E-5
Q222 C-7
Q223 C-7
Q224 B-7




**VSW-42** – COMPONENT SIDE –
1-654-281-11
VID-P100

## VSW-42 (1/2); VIDEO BOARD




**

| REF NO. | J-U | EK |
|---|---|---|
| JW303 | NO M*T | M*T |
| X201 | 14.318 MHz | 14.1875 MHz |

**VSW-42 (1/2)**
1-654-281-11
VID-P100

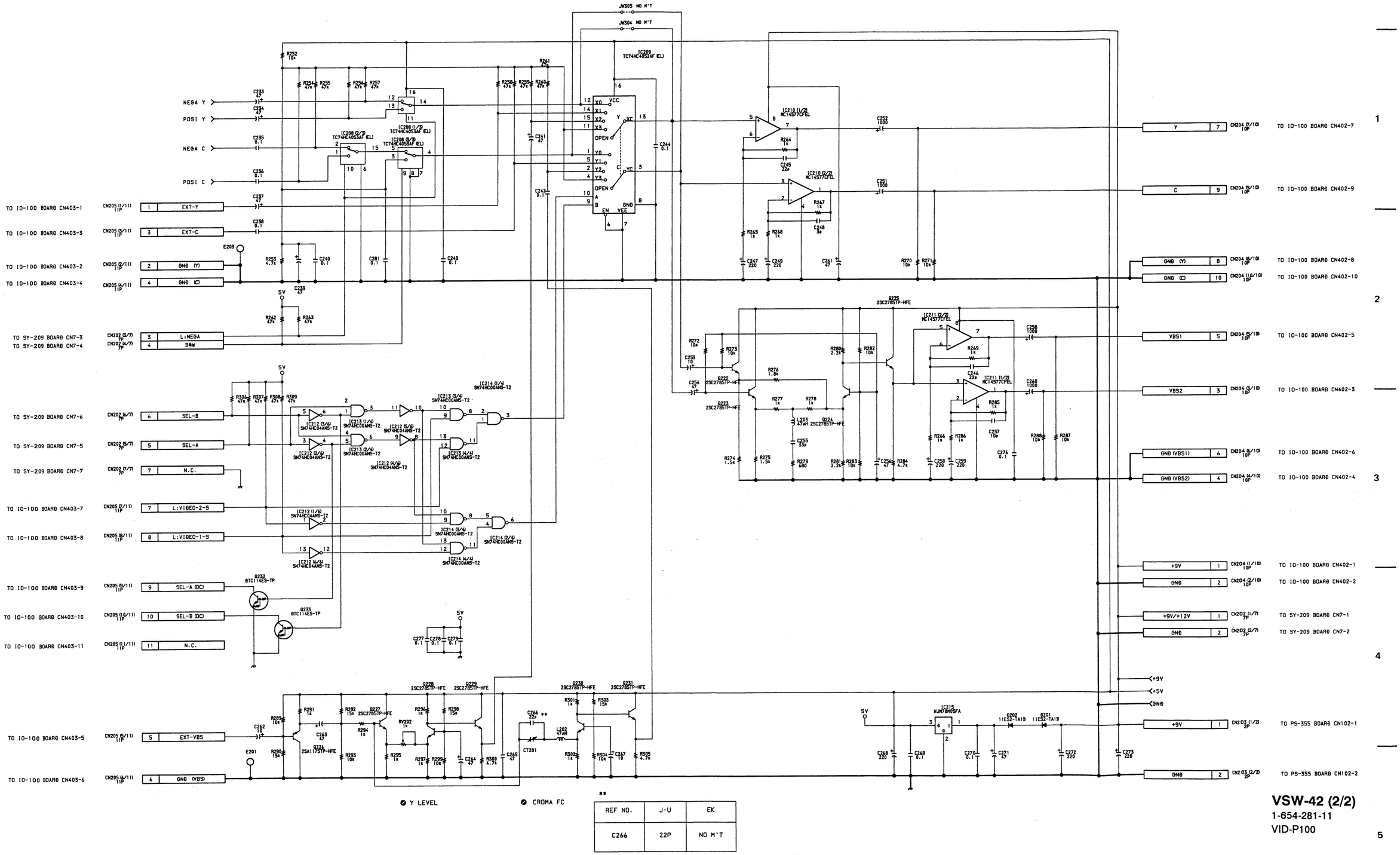
VID-P100

5-5 5-5

A B C D E F G H

1 2 3 4 5

## VSW-42 (2/2); VIDEO BOARD




**VSW-42 (2/2)**
1-654-281-11
VID-P100

## SY-209; SYSTEM CONTROL BOARD

SY-209 1-654-573-11

CNI1 B-2

CN1 A-1
CN2 E-1
CN3 G-2
CN4 G-3
CN5 G-3
CN6 F-3
CN7 D-3
CN8 A-3

D1 B-2
D2 B-2
D3 E-3
D4 F-2
D5 F-2
D6 D-2
D7 D-2

E1 E-3
E2 B-1
E3 F-1

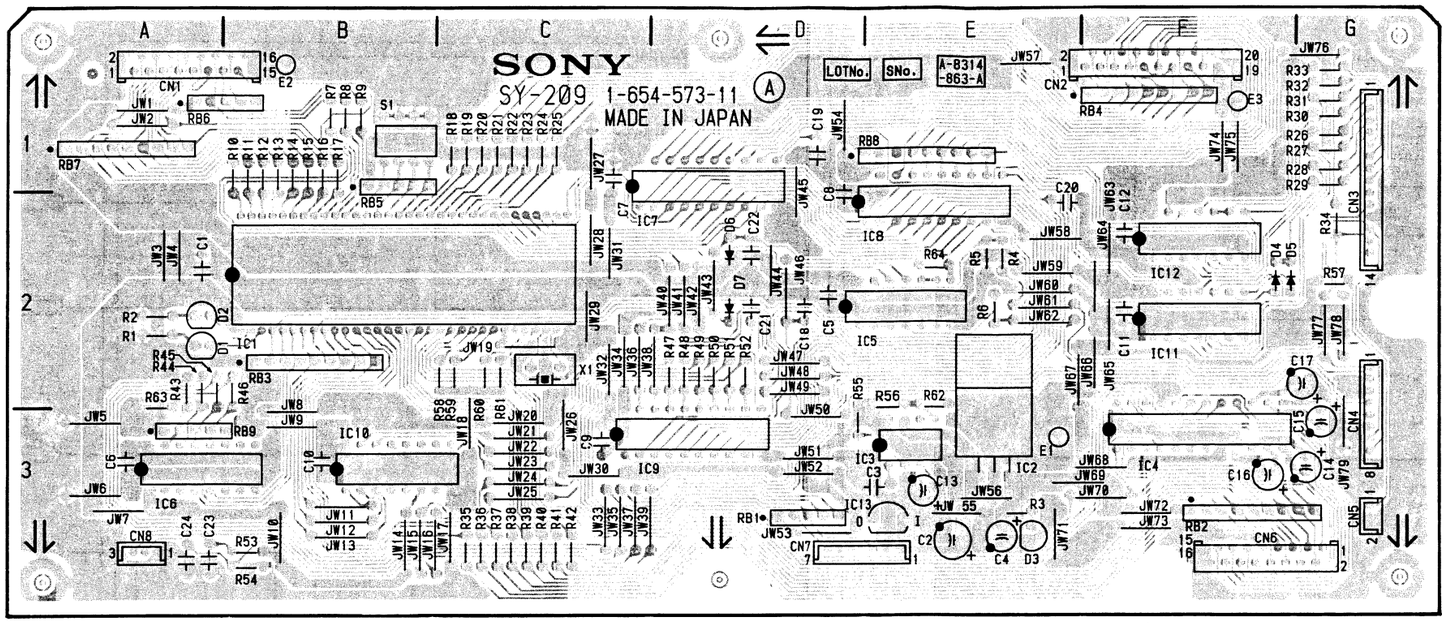
IC1 B-2
IC2 E-3
IC3 D-3
IC4 F-3
IC5 D-2
IC6 A-3
IC7 C-2
IC8 E-2
IC9 C-3
IC10 B-3
IC11 F-2
IC12 F-2
IC13 D-3

RB1 D-3
RB2 F-3
RB3 B-2
RB4 F-1
RB5 B-2
RB6 A-1
RB7 A-1
RB8 D-1
RB9 B-3

S1 B-1

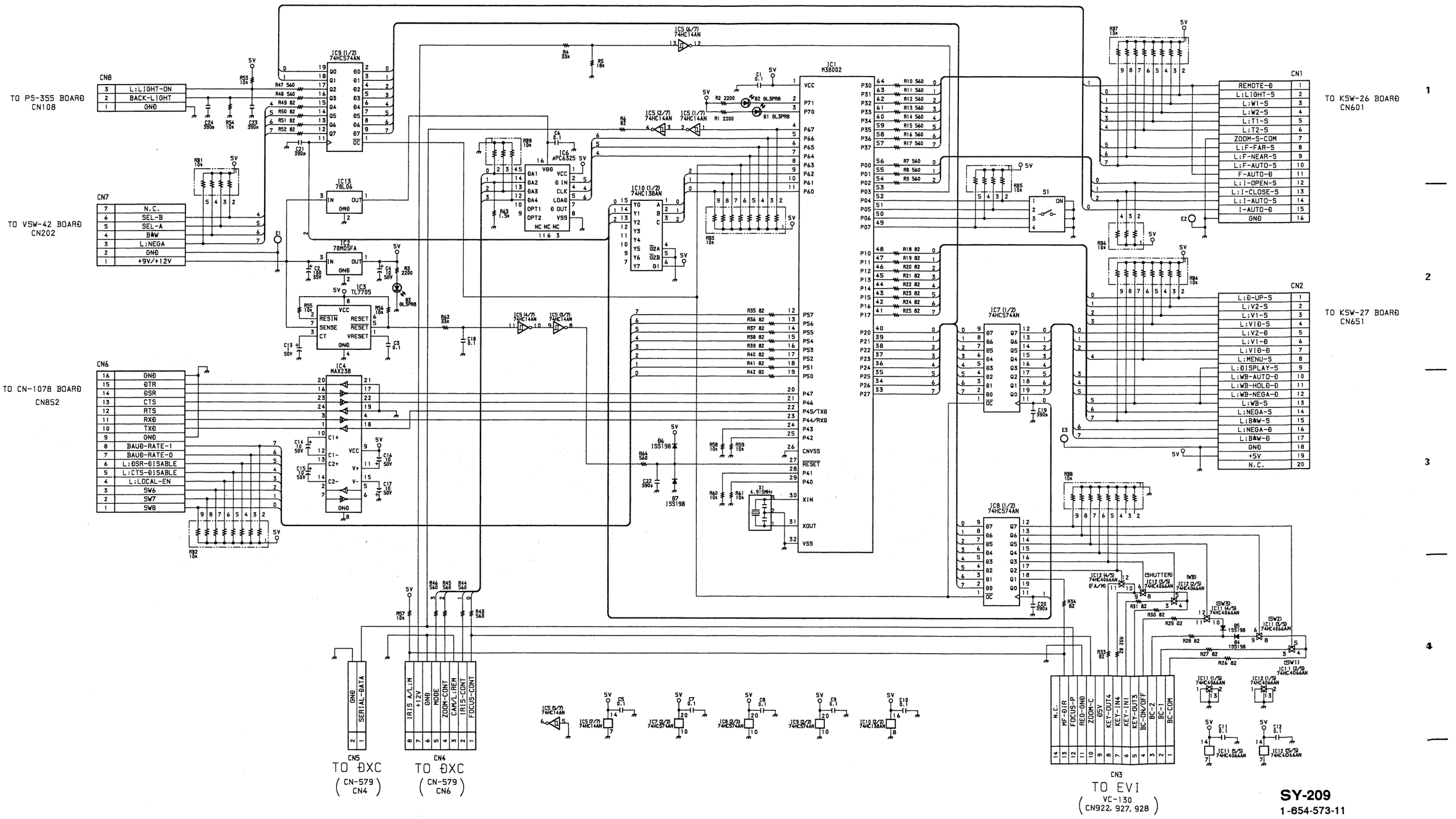
X1 C-2

* Soldering Side




**SY-209** – COMPONENT SIDE –
1-654-573-11
VID-P100

## SY-209; SYSTEM CONTROL BOARD



PS-355 1-654-277-11

CN101 F-7
CN102 E-1
CN103 D-1
CN104 B-3
CN105 A-3
CN106 C-1
CN108 D-5

D101 E-5
D102 E-3
D103 C-7
D104 A-5
D105 A-3
D106 D-2

IC101 F-3
IC102 C-6

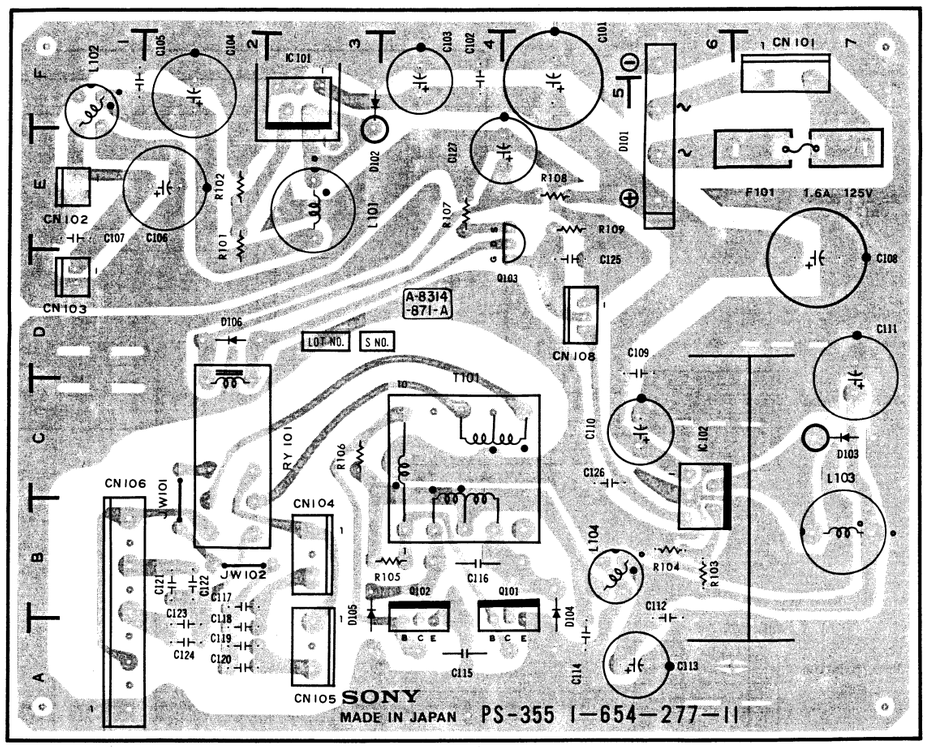
Q101 B-5
Q102 B-4
Q103 D-5

RY101 C-3

T101 D-4

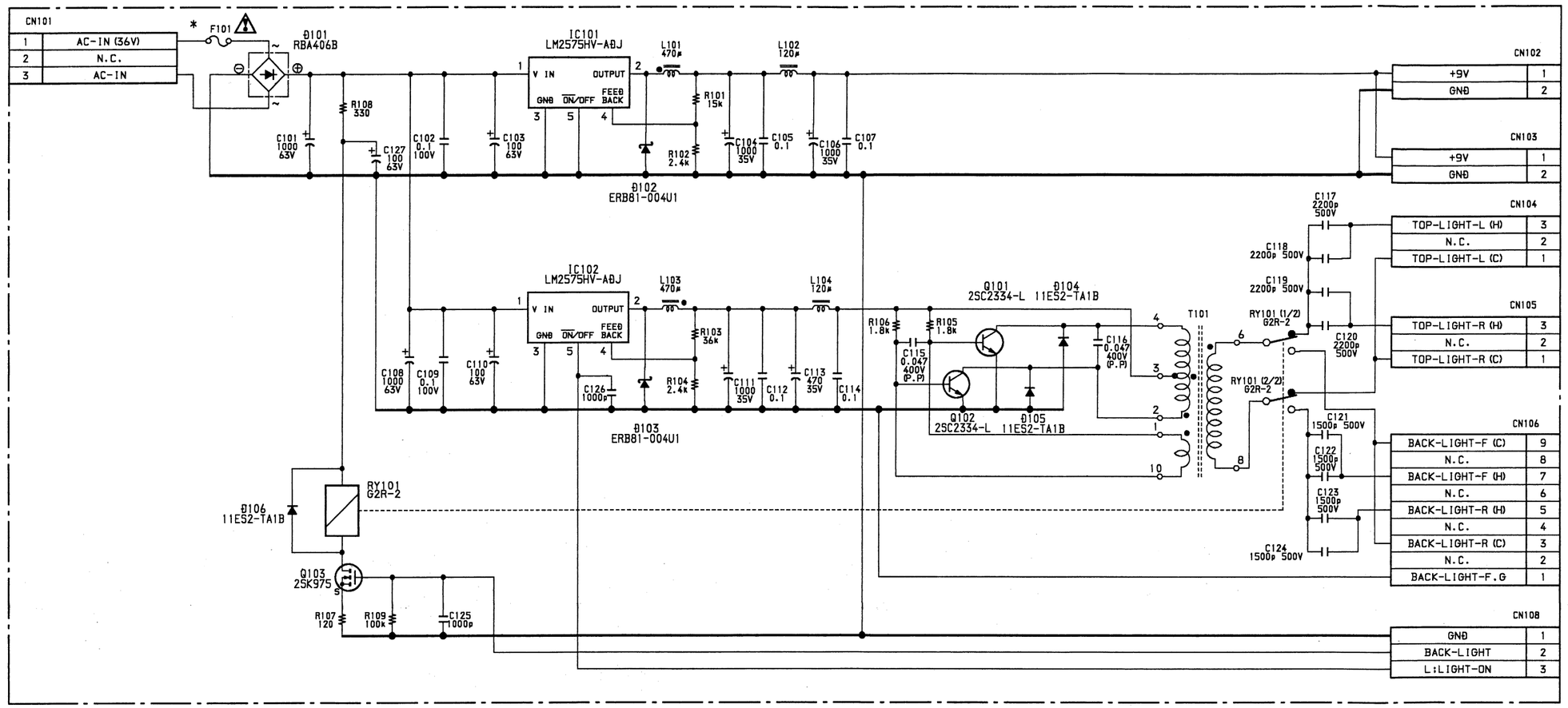
* Soldering Side

## PS-355; POWER BOARD




**PS-355** – COMPONENT SIDE –
1-654-277-11
VID-P100

## PS-355; POWER BOARD




* F101

| | |
|---|---|
| J, U MODEL | 125V 1.6A |
| EK MODEL | T1.6AL 250V |

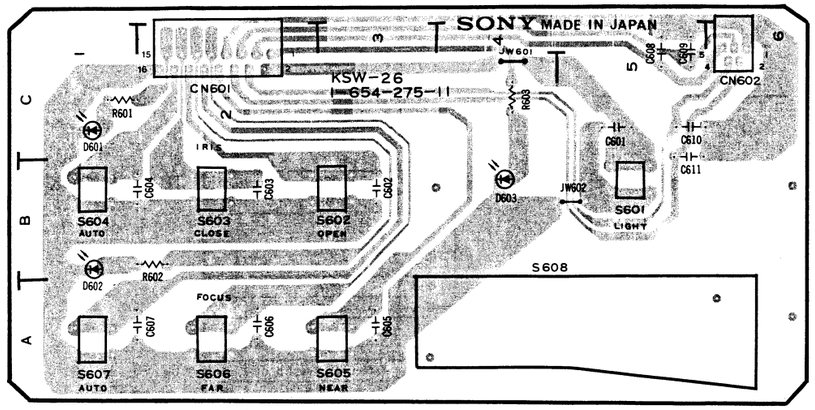
⚠印の部品，または⚠印付の点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

**PS-355**
1-654-277-11
VID-P100

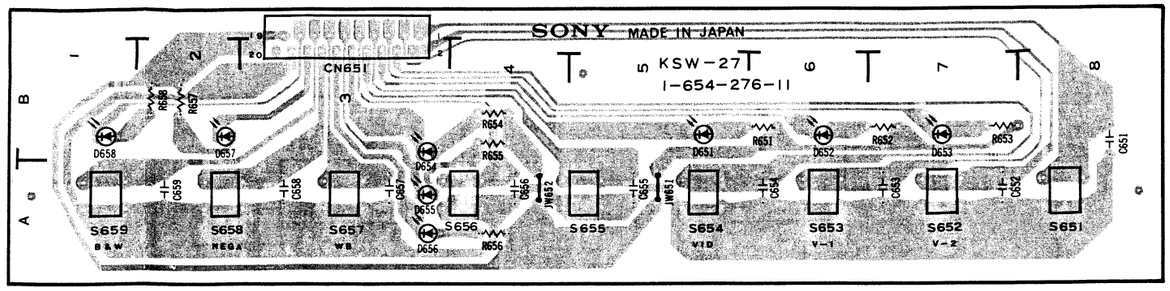
KSW-26, KSW-27, MA-67, CN-1078, FU-61

## KSW-26; KEY SWITCH BOARD



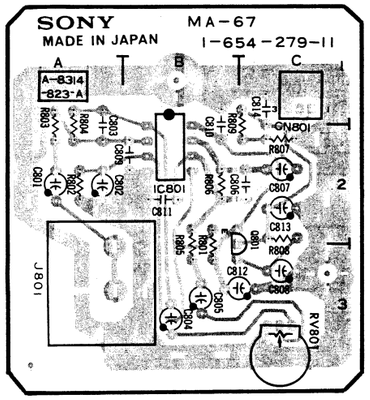

**KSW-26** – COMPONENT SIDE –
1-654-275-11
VID-P100

## KSW-27; KEY SWITCH BOARD



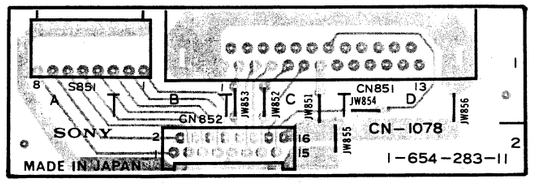

**KSW-27** – COMPONENT SIDE –
1-654-276-11
VID-P100

## MA-67; MIC AMP BOARD



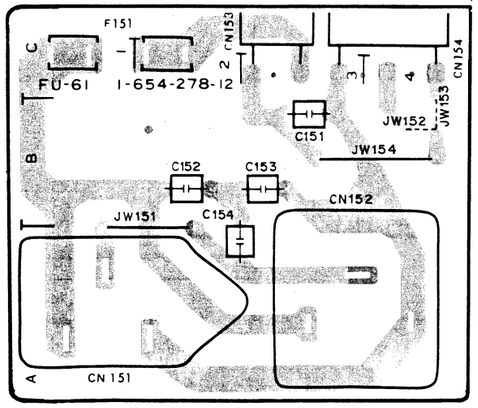

**MA-67** – COMPONENT SIDE –
1-654-279-11
VID-P100

## CN-1078; CONNECTOR BOARD




**CN-1078** – COMPONENT SIDE –
1-654-283-11
VID-P100

## FU-61; FUSE BOARD




**FU-61** – COMPONENT SIDE –
1-654-278-12
VID-P100


5-12

FRAME

KSW-26; KEY SWITCH BOARD

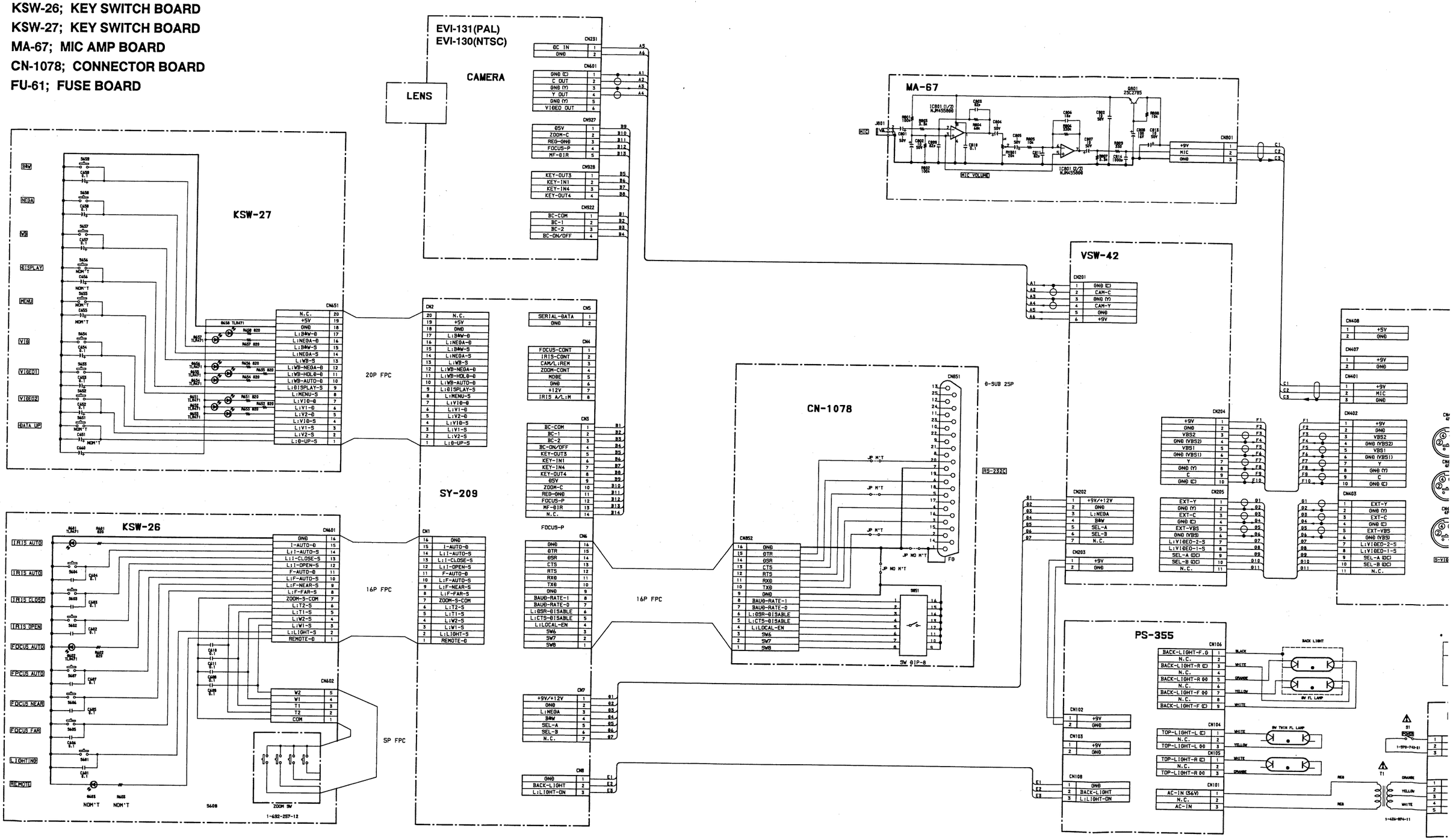
KSW-27; KEY SWITCH BOARD

MA-67; MIC AMP BOARD

CN-1078; CONNECTOR BOARD

FU-61; FUSE BOARD

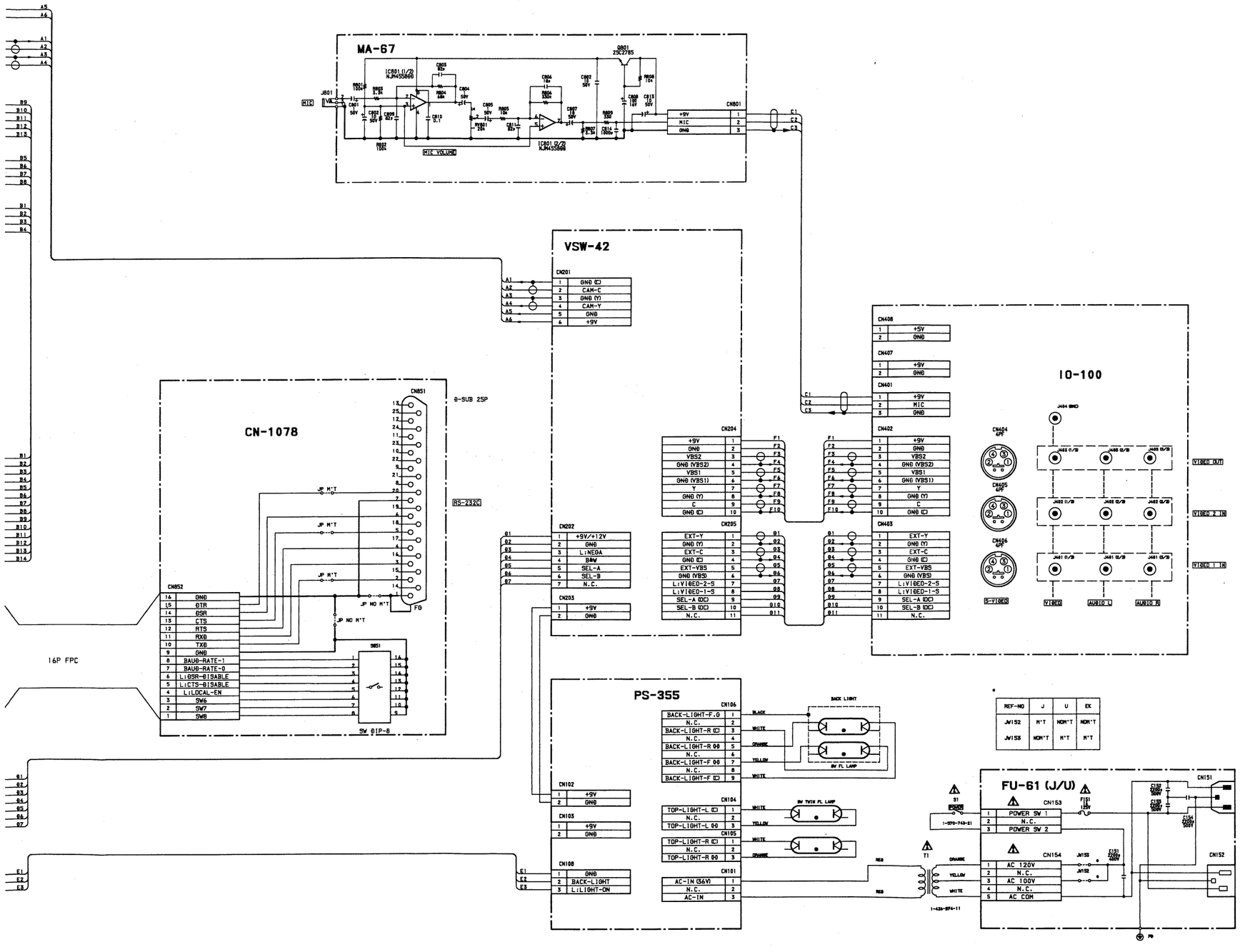





VID-P100

5-13

5-13




| REF-NO | J | U | EK |
|---|---|---|---|
| JW152 | M'T | NON'T | NON'T |
| JW153 | NON'T | M'T | M'T |

⚠印の部品，または⚠印付の点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

**FRAME**
VID-P100

# SECTION 6
# SEMICONDUCTOR PIN ASSIGNMENTS

ここに記載されているIC, トランジスタ, ダイオードは, それぞれの機能を等価的に表したものです。したがって互換性を表すものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は, SPARE PARTSの章を参照して下さい。
等価回路はICメーカーのData Bookに従いました。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

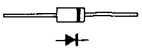

| DIODE | PAGE |
|---|---|
| 11ES2 | 6-2 |
| 1SS198 | 6-2 |
| ERB81-004 | 6-2 |
| GL3PR8 | 6-2 |
| RBA-406B | 6-2 |
| TLR147 | 6-2 |

| TRANSISTOR | PAGE |
|---|---|
| 2SA1175 | 6-2 |
| 2SC2334 | 6-2 |
| 2SC2785 | 6-2 |
| 2SK975 | 6-2 |
| DTC114ES | 6-2 |

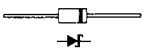
| IC | PAGE |
|---|---|
| CXD1217M | 6-3 |
| LM1881M | 6-4 |
| LM2575HVT-ADJLB03 | 6-4 |
| M38002E4SP | 6-4 |
| MAX238CNG | 6-5 |
| MC14052BCP | 6-5 |
| MC14053BCP | 6-5 |
| MC14577CF | 6-5 |
| NJM4558D-D | 6-6 |
| NJM78L06A | 6-6 |
| NJM78M05FA | 6-6 |
| NJM78L05A | 6-6 |
| SN74HC00ANS | 6-6 |
| SN74HC04ANS | 6-6 |
| SN74HC138AN | 6-6 |
| SN74HC14AN | 6-6 |
| SN74HC574AN | 6-7 |
| TC74HC221AF | 6-7 |
| TC74HC4052AF | 6-7 |
| TC74HC4053AF | 6-7 |
| TC74HC4066AP | 6-7 |
| TL7705CP-B | 6-7 |
| UPC1093J | 6-8 |
| UPD6325C | 6-8 |

# DIODE, TRANSISTOR

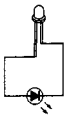
## DIODE



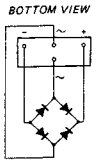
11ES2



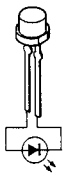
1SS198
ERB81-004



GL3PR8 ; RED

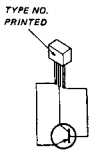



RBA-406B

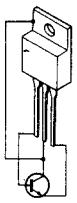


TLR147 ; RED

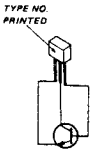
## TRANSISTOR



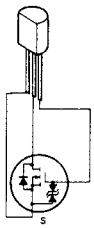

2SA1175



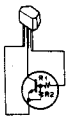
2SC2334




2SC2785



2SK975



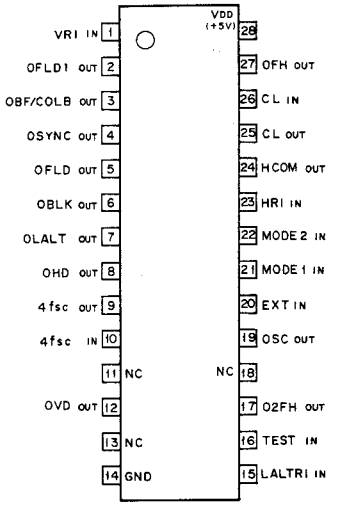
DTC114ES (R1 = 10K, R2 = 10K)

IC

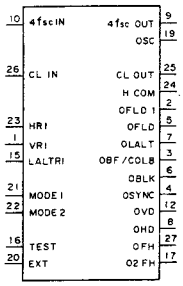
CXD1217M (SONY) FLAT PACKAGE

C-MOS SYNC GENERATOR

– TOP VIEW –




CXD1217M(1/5)

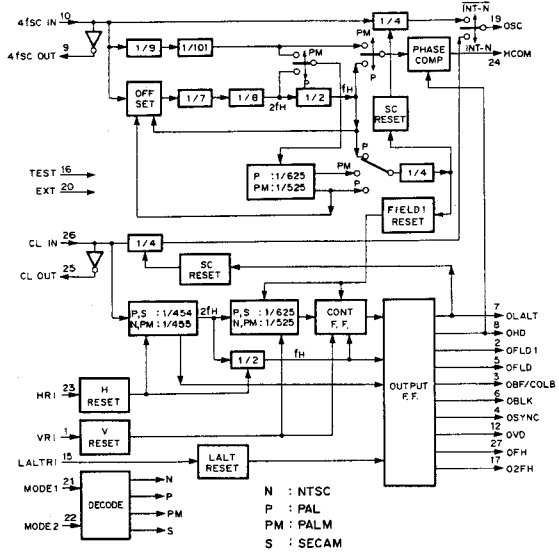



| SYSTEM | 4fsc | CLOCK |
|---|---|---|
| NTSC | 910fH | 910fH |
| PAL | 1135fH+2fV | 908fH |
| PALM | 909fH | 910fH |
| SECAM | — | 908fH |

| INPUT | | SYSTEM |
|---|---|---|
| MODE1 | MODE2 | |
| 0 | 0 | NTSC |
| 0 | 1 | SECAM |
| 1 | 0 | PALM |
| 1 | 1 | PAL |

0 ; LOW LEVEL
1 ; HIGH LEVEL

CXD1217M(2/5)




N : NTSC
P : PAL
PM : PALM
S : SECAM

**INPUT**

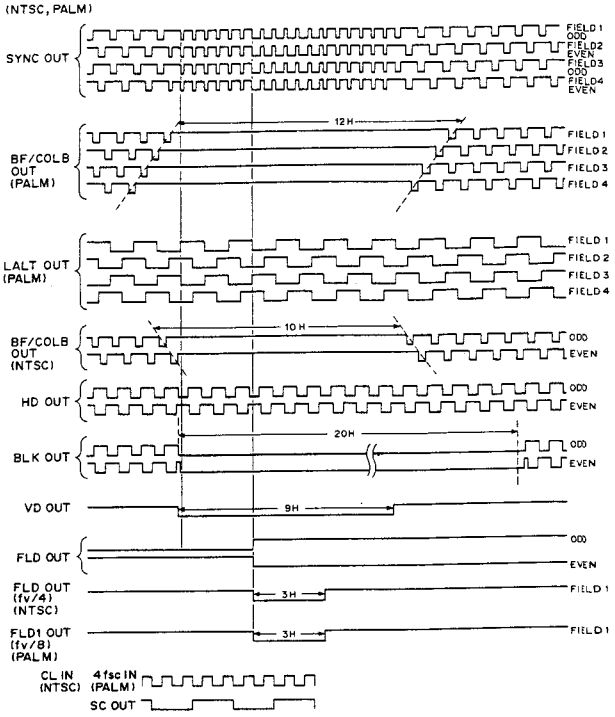
| | |
|---|---|
| 4fSC IN | ; 4fSC INPUT |
| CL IN | ; CLOCK INPUT |
| EXT | ; SYNC MODE SELECT (L ; INTERNAL/H ; EXTERNAL) |
| HRI | ; H RESET |
| LALTRI | ; LINE CHANGE RESET |
| MODE 1,2 | ; SYSTEM SELECT |
| VRI | ; V RESET |

**OUT PUT**

| | |
|---|---|
| 4fSC OUT | ; 4fSC OUTPUT |
| CL OUT | ; CLOCK OUTPUT |
| HCOM | ; PHASE COMPARATOR |
| O2fH | ; 2fH OUTPUT |
| OBF/COLB | ; BURST FLAG/COLOR BLANKING |
| OBLK | ; COMPOSITE BLANKING |
| OFH | ; H FREQUENCE |
| OFLD | ; EVEN, ODD |
| OFLD1 | ; FIELD1 |
| OHD | ; H DRIVE |
| OLALT | ; LINE CHANGE |
| OSC | ; SUBCARRIER |
| OSYNC | ; COMPOSITE SYNC |
| OVD | ; V DRIVE |

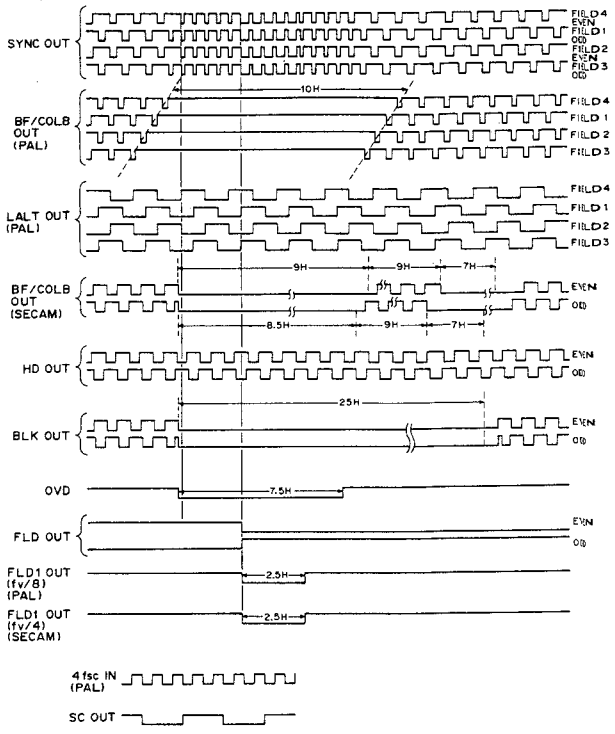
CXD1217M(3/5)

(NTSC, PALM)

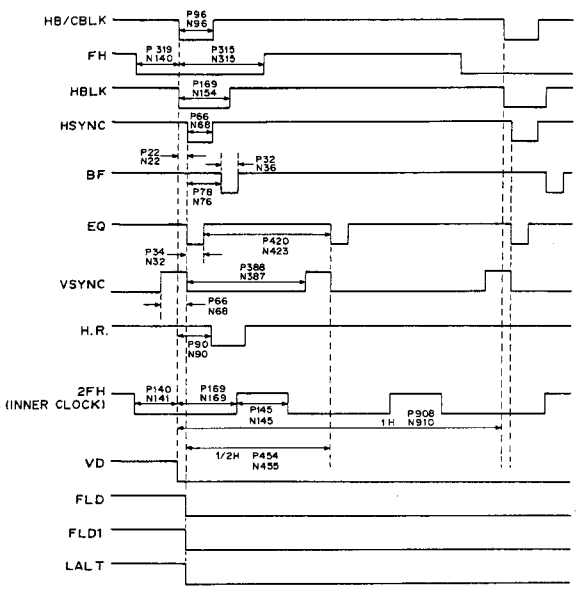



CXD1217M(4/5)

(PAL, SECAM)



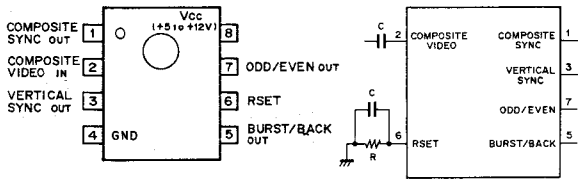
CXD1217M(5/5)

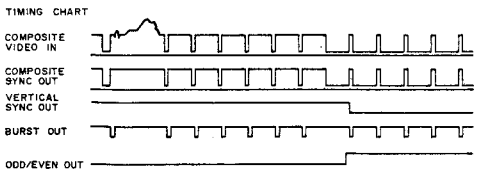



P : PAL, SECAM
N : NTSC, PALM

LM1881M (NS) FLAT PACKAGE

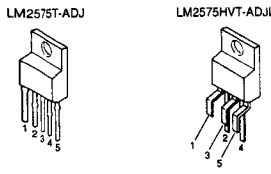
VIDEO SYNC SEPARATOR
– TOP VIEW –

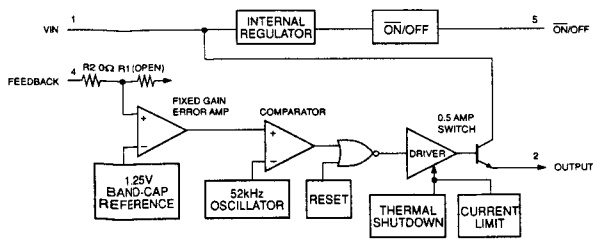



LM2575HVT-ADJLB03 (NSC)
LM2575T-ADJ (NSC)

SIMPLE SWITCHER 1A STEP-DOWN TYPE VOLTAGE REGULATOR
– SIDE VIEW –

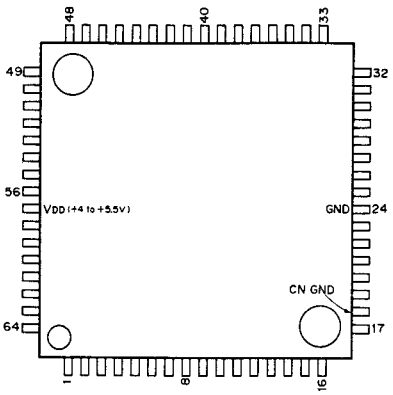



M38002E4SP (MITSUBISHI)

C-MOS 8BIT SINGLE-CHIP MICROCOMPUTER
– TOP VIEW –

M38002E4FP(1/3)




($V_{DD}$ = +4 to +5.5V)

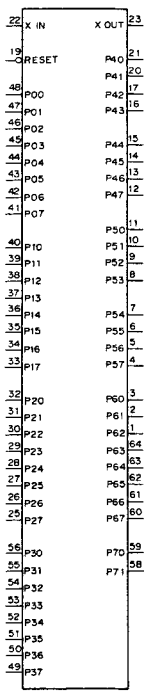
| PIN No. | I/O | SIGNAL | PIN No. | I/O | SIGNAL | PIN No. | I/O | SIGNAL | PIN No. | I/O | SIGNAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I/O | P62 | 17 | I | P42/INT0 | 33 | I/O | P17/AD15 | 49 | I/O | P37/$\overline{RD}$ |
| 2 | I/O | P61 | 18 | I | CN GND | 34 | I/O | P16/AD14 | 50 | I/O | P36/$\overline{WR}$ |
| 3 | I/O | P60 | 19 | I | $\overline{RESET}$ | 35 | I/O | P15/AD13 | 51 | I/O | P35/SYNC |
| 4 | I/O | P57 | 20 | I/O | P41 | 36 | I/O | P14/AD12 | 52 | I/O | P34/$\phi$ |
| 5 | I/O | P56 | 21 | I/O | P40 | 37 | I/O | P13/AD11 | 53 | I/O | P33/$\overline{RESET\ OUT}$ |
| 6 | I/O | P55/CNTR1 | 22 | I | $X_{IN}$ | 38 | I/O | P12/AD10 | 54 | I/O | P32/$\overline{ONW}$ |
| 7 | I/O | P54/CNTR0 | 23 | O | $X_{OUT}$ | 39 | I/O | P11/AD9 | 55 | I/O | P31 |
| 8 | I/O | P53/INT5 | 24 | – | GND | 40 | I/O | P10/AD8 | 56 | I/O | P30 |
| 9 | I/O | P52/INT4 | 25 | I/O | P27/DB7 | 41 | I/O | P07/AD7 | 57 | – | $V_{DD}$ |
| 10 | I/O | P51/INT3 | 26 | I/O | P26/DB6 | 42 | I/O | P06/AD6 | 58 | I/O | P71 |
| 11 | I/O | P50/INT2 | 27 | I/O | P25/DB5 | 43 | I/O | P05/AD5 | 59 | I/O | P70 |
| 12 | I/O | P47/$\overline{SRDY}$ | 28 | I/O | P24/DB4 | 44 | I/O | P04/AD4 | 60 | I/O | P67 |
| 13 | I/O | P46/SCLK | 29 | I/O | P23/DB3 | 45 | I/O | P03/AD3 | 61 | I/O | P66 |
| 14 | I/O | P45/TXD | 30 | I/O | P22/DB2 | 46 | I/O | P02/AD2 | 62 | I/O | P65 |
| 15 | I/O | P44/RXD | 31 | I/O | P21/DB1 | 47 | I/O | P01/AD1 | 63 | I/O | P64 |
| 16 | I/O | P43/INT1 | 32 | I/O | P20/DB0 | 48 | I/O | P00/AD0 | 64 | I/O | P63 |

**INPUT**
$\overline{RESET}$ ; ACTIVE RESET
X IN ; CLOCK

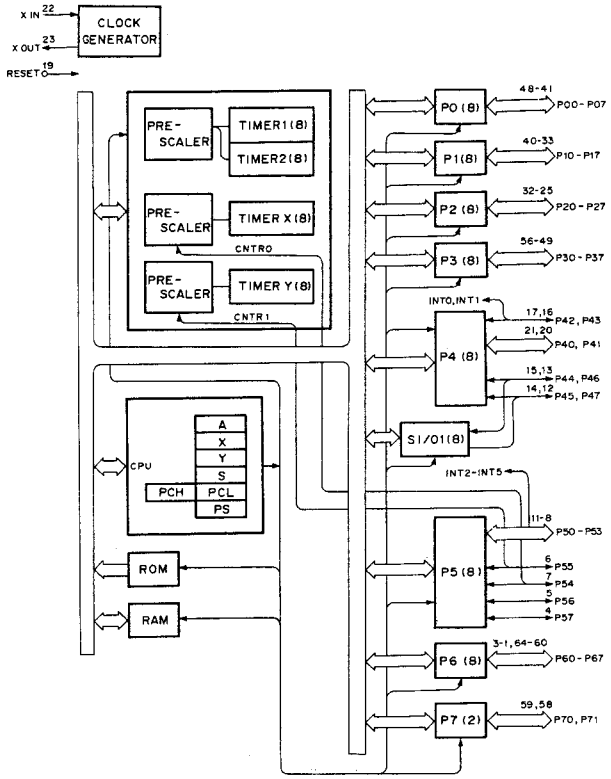
**OUTPUT**
X OUT ; CLOCK

**INPUT/OUTPUT**
P00 – P07 ; 8-BIT IN/OUT PORT (P0)
P10 – P17 ; 8-BIT IN/OUT PORT (P1)
P20 – P27 ; 8-BIT IN/OUT PORT (P2)
P30 – P37 ; 8-BIT IN/OUT PORT (P3)
P40, P41 ; 8-BIT IN/OUT PORT (P4)
P42/INT0, P43/INT1
P44/RXD, P45/TXD
P46/SCLK, P47/$\overline{SRDY}$
P50/INT2 – P53/INT5 ; 8-BIT IN/OUT PORT (P5)
P54/CNTR0, P55/CNTR1
P56, P57
P60 – P67 ; 8-BIT IN/OUT PORT (P6)
P70, P71 ; 8-BIT IN/OUT PORT (P7)

M38002E4FP(2/3)

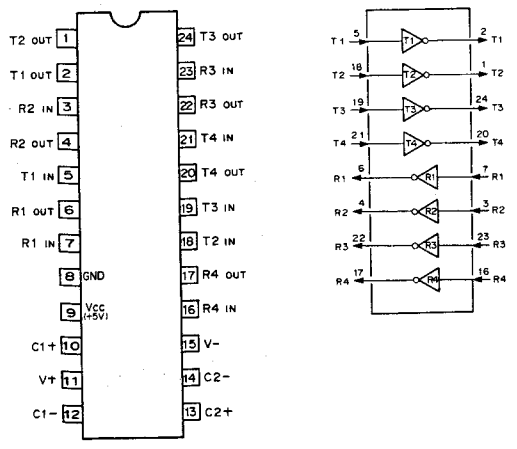


M38002E4FP(3/3)



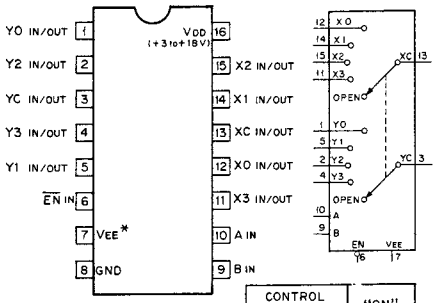

MAX238CNG (MAXIM)

+5V POWER RS-232 DRIVERS/RECEIVERS
– TOP VIEW –




MC14052BCP (MOTOROLA)

C-MOS DUAL 4-CHANNEL ANALOG MULTIPLEXERS/DEMULTIPLEXERS
– TOP VIEW –



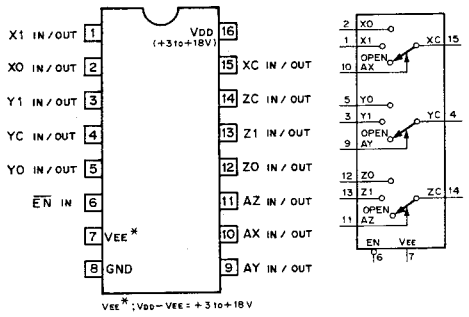

VEE*; VDD – VEE = +3 to +18V

| CONTROL INPUTS | | | "ON" CHANNEL |
|---|---|---|---|
| EN | B | A | |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 |
| 0 | 1 | 0 | 2 |
| 0 | 1 | 1 | 3 |
| 1 | X | X | OPEN |

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

MC14053BCP (MOTOROLA)

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXERS/DEMULTIPLEXERS
– TOP VIEW –



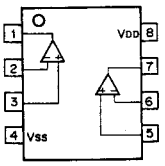

VEE*; VDD – VEE = +3 to +18 V

| CONT. INPUTS | | ON CHANNEL |
|---|---|---|
| EN | A (X,Y,Z,) | |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | X | OPEN |

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

MC14577CF (MOTOROLA) FLAT PACKAGE

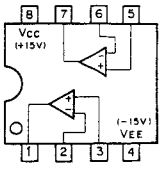
C-MOS DUAL VIDEO AMPLIFIERS
– TOP VIEW –




*|VDD + | VSS | | = +5V to +12V

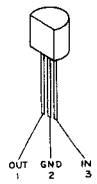
NJM4558D-D (JRC)

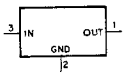
DUAL OPERATIONAL AMPLIFIER
– TOP VIEW –




NJM78L05A (JRC) +5V (100mA)
NJM78L06A (JRC) +5V (100mA)

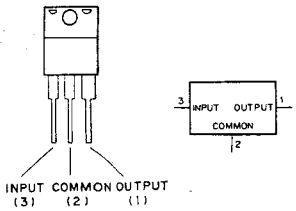
POSITIVE VOLTAGE REGULATOR



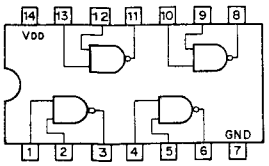

NJM78M05FA (JRC) +5V (0.5 A)

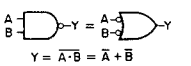
POSITIVE VOLTAGE REGULATOR
– FRONT VIEW –




SN74HC00ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATES
– TOP VIEW –




| A | B | Y |
|---|---|---|
| 0 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

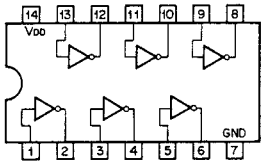
0 ; LOW LEVEL
1 ; HIGH LEVEL

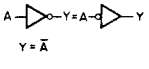
NOTE :

| TYPE | VDD |
|---|---|
| TC74AC00 TYPE<br>TC74VHC00 | +2 to +5.5V |
| MC74HCT00N | +5V |
| 74ACT00 TYPE | +4.5 to +5.5V |
| OTHER TYPES | +2 to +6V |

SN74HC04ANS (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
– TOP VIEW –




| A | Y |
|---|---|
| 0 | 1 |
| 1 | 0 |

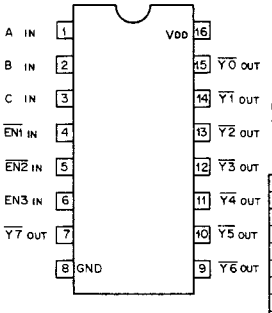
0 ; LOW LEVEL
1 ; HIGH LEVEL

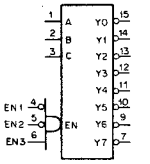
NOTE :

| TYPE | VDD |
|---|---|
| 74HCT04 TYPE | +5V |
| TC74AC04 TYPE<br>TC74VHC04 TYPE | +2 to +5.5V |
| 74ACT04 TYPE | +4.5 to +5.5V |
| OTHER TYPES | +2 to +6V |

SN74HC138AN (TI)

C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
– TOP VIEW –




| INPUTS | | | | OUTPUTS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EN | C | B | A | Y7 | Y6 | Y5 | Y4 | Y3 | Y2 | Y1 | Y0 |
| 0 | X | X | X | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

EN = $\overline{EN1} \cdot \overline{EN2} \cdot EN3$

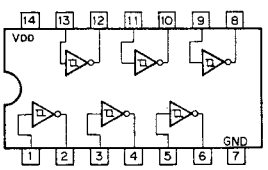
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

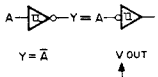
NOTE :

| TYPE | VDD |
|---|---|
| 74HCT138 TYPE | +5V |
| 74ACT138 TYPE | +4.5 to +5.5V |
| TC74AC138 TYPE<br>TC74VHC138 | +2 to +5.5V |
| OTHER TYPES | +2 to +6V |

SN74HC14AN (TI)

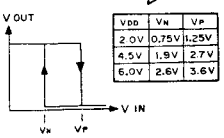
C-MOS HEX SCHMITT TRIGGER INVERTERS
– TOP VIEW –




| A | Y |
|---|---|
| 0 | 1 |
| 1 | 0 |

0 ; LOW LEVEL
1 ; HIGH LEVEL



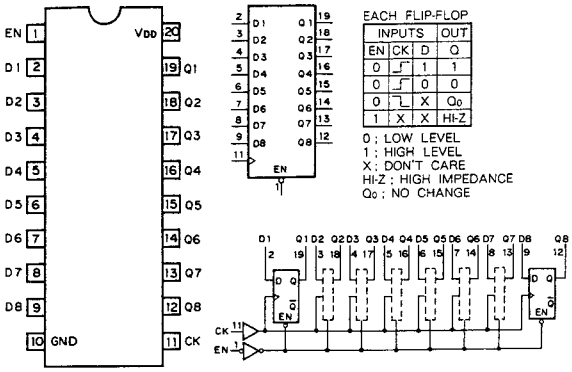

| VDD | VN | VP |
|---|---|---|
| 2.0V | 0.75V | 1.25V |
| 4.5V | 1.9V | 2.7V |
| 6.0V | 2.6V | 3.6V |

NOTE :

| TYPE | VDD |
|---|---|
| TC74AC/VHC | +2 to +5.5V |
| OTHER TYPES | +2 to +6V |

SN74HC574AN (TI)

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
– TOP VIEW –







| EACH FLIP-FLOP | | | |
|---|---|---|---|
| INPUTS | | | OUT |
| EN | CK | D | Q |
| 0 | ↑ | 1 | 1 |
| 0 | ↑ | 0 | 0 |
| 0 | ↓ | X | $Q_0$ |
| 1 | X | X | HI-Z |

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
$Q_0$ ; NO CHANGE

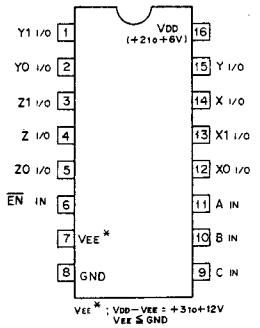


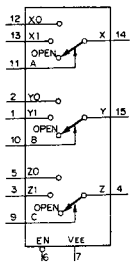

NOTE :

| TYPE | VDD |
|---|---|
| 74AC/74HC | + 2 to + 6V |
| 74ACT/74FCT /74HCT | + 5V |
| TC74AC574F TC74VHC574 | + 2 to + 5.5V |

TC74HC4053AF (TOSHIBA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –



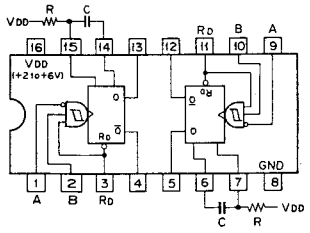

VEE * ; VDD – VEE : + 3 to + 12V
VEE ≦ GND

| CONTROL INPUTS | | | | ON CHANNEL | | |
|---|---|---|---|---|---|---|
| EN | SELECT | | | | | |
| | C | B | A | | | |
| 0 | 0 | 0 | 0 | Z0 | Y0 | X0 |
| 0 | 0 | 0 | 1 | Z0 | Y0 | X1 |
| 0 | 0 | 1 | 0 | Z0 | Y1 | X0 |
| 0 | 0 | 1 | 1 | Z0 | Y1 | X1 |
| 0 | 1 | 0 | 0 | Z1 | Y0 | X0 |
| 0 | 1 | 0 | 1 | Z1 | Y0 | X1 |
| 0 | 1 | 1 | 0 | Z1 | Y1 | X0 |
| 0 | 1 | 1 | 1 | Z1 | Y1 | X1 |
| 1 | X | X | X | OPEN | | |

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC74HC221AF (TOSHIBA) FLAT PACKAGE

C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
– TOP VIEW –



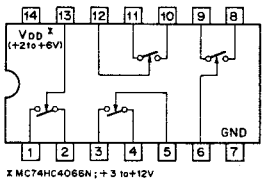

| INPUTS | | | OUTPUTS | |
|---|---|---|---|---|
| RD | A | B | Q | $\bar{Q}$ |
| 0 | X | X | 0 | 1 |
| X | 1 | X | 0 | 1 |
| X | X | 0 | 0 | 1 |
| 1 | 0 | ↑ | ⊓ | ⊔ |
| 1 | ↓ | 1 | ⊓ | ⊔ |
| ↑ | 0 | 1 | ⊓ | ⊔ |

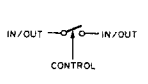
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

TC74HC4066AP (TOSHIBA)

C-MOS BILATERAL ANALOG SWITCH
– TOP VIEW –

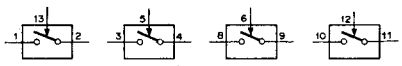



| CONTROL | SWITCH |
|---|---|
| 0 | OFF |
| 1 | ON |

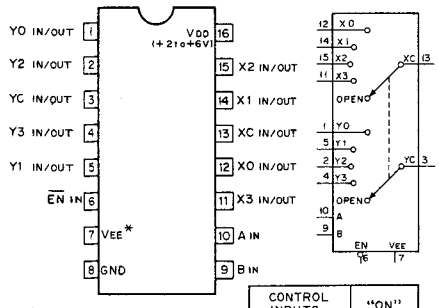
0 ; LOW LEVEL
1 ; HIGH LEVEL

* MC74HC4066N ; + 3 to + 12V




TC74HC4052AF (TOSHIBA) FLAT PACKAGE

C-MOS DUAL 4-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –







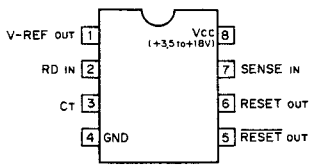
VEE * ; VDD – VEE = + 3 to + 12 V

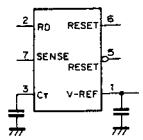
| CONTROL INPUTS | | | "ON" CHANNEL |
|---|---|---|---|
| EN | B | A | |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 |
| 0 | 1 | 0 | 2 |
| 0 | 1 | 1 | 3 |
| 1 | X | X | OPEN |

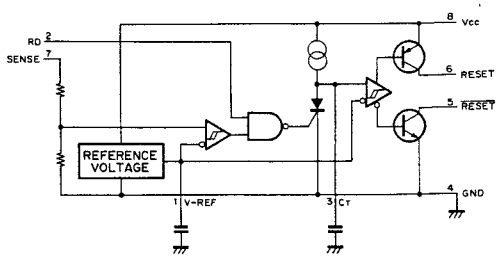
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

TL7705CP-B (TI)

POWER VOLTAGE SUPERVISOR
– TOP VIEW –

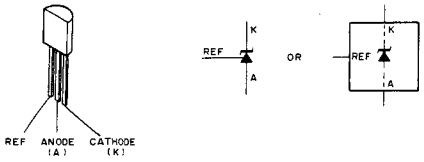


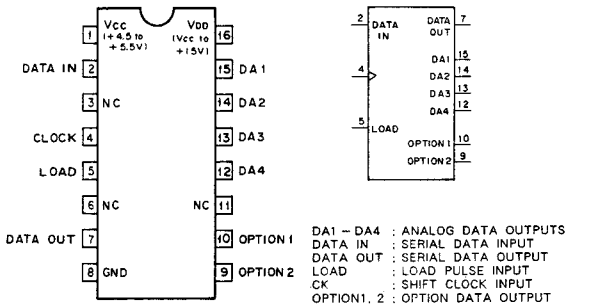
UPC1093J (NEC)

ADJUSTABLE PRECISION SHUNT REGULATOR

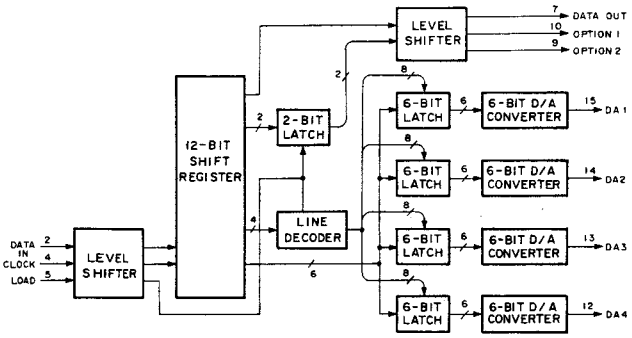



UPD6325C (NEC)

C-MOS 6-BIT D/A CONVERTER
– TOP VIEW –




DA1 – DA4 : ANALOG DATA OUTPUTS
DATA IN : SERIAL DATA INPUT
DATA OUT : SERIAL DATA OUTPUT
LOAD : LOAD PULSE INPUT
CK : SHIFT CLOCK INPUT
OPTION1, 2 : OPTION DATA OUTPUT



# SECTION 7
# SPARE PARTS

## 7-1. 補修用部品注意事項

(1) 安全重要部品
回路図、分解図、電気部品表中、⚠印の部品は安全性を維持するために重要な部品です。従ってこれらの部品を交換するときには必ず指定の部品と交換して下さい。

(2) 部品の共通化
ソニーから供給される部品は、セットに実装されているものと異なることがあります。これは部品の共通化、改良等によるものです。
分解図や電気部品表には現時点での共通化された部品が記載されています。

(3) 部品の在庫
部品表のSP (Supply code) 欄に "o" で示される部品は交換頻度が低い部品ですので在庫していないことがあり、納期が長くなることがあります。

(4) コンデンサー、インダクター、抵抗の単位
回路図、分解図、電気部品表中、特に明記したものを除き、下記の単位は省略されています。
コンデンサー: μF
インダクター: μH
抵抗 : Ω

## 7-1. NOTE ON SPARE PARTS

**(1) Safety Related Components Warning**
Components marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.
Replace these components with Sony Parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

**(2) Standardization of Parts**
Repair parts supplied from Sony Parts Center may not be always identical with the parts which actually in use due to accommodating improved parts and/or engineering changes or standardization of genuine parts.
This manual's exploded views and electrical spare parts list indicate the part numbers of "the standardized genuine parts at present".

**(3) Stock of Parts**
Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

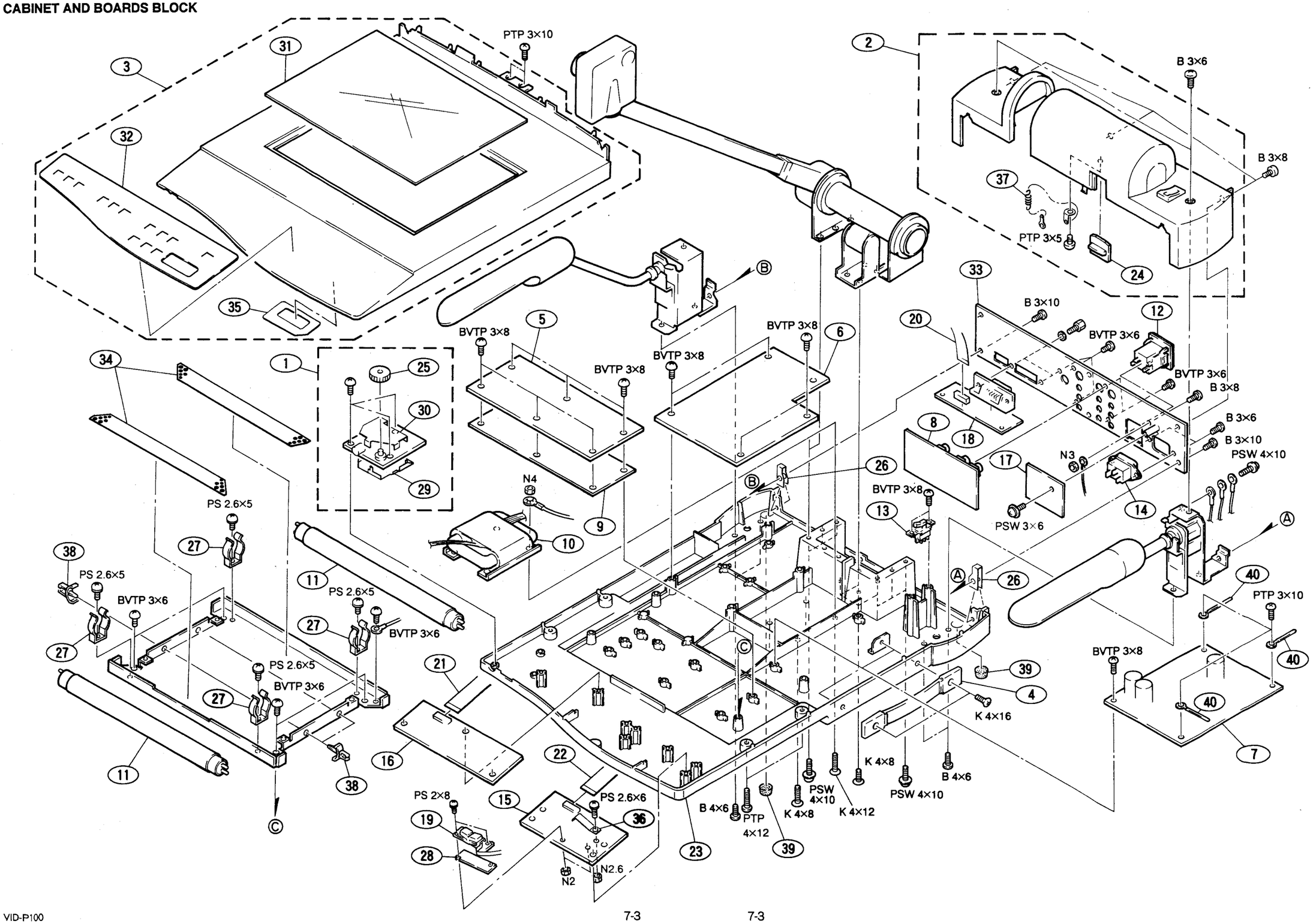
**(4) Units for Capacitors, Inductors and Resistors**
The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.
Capacitors : μF
Inductors : μH
Resistors : ohm

## 7-2. EXPLODED VIEW

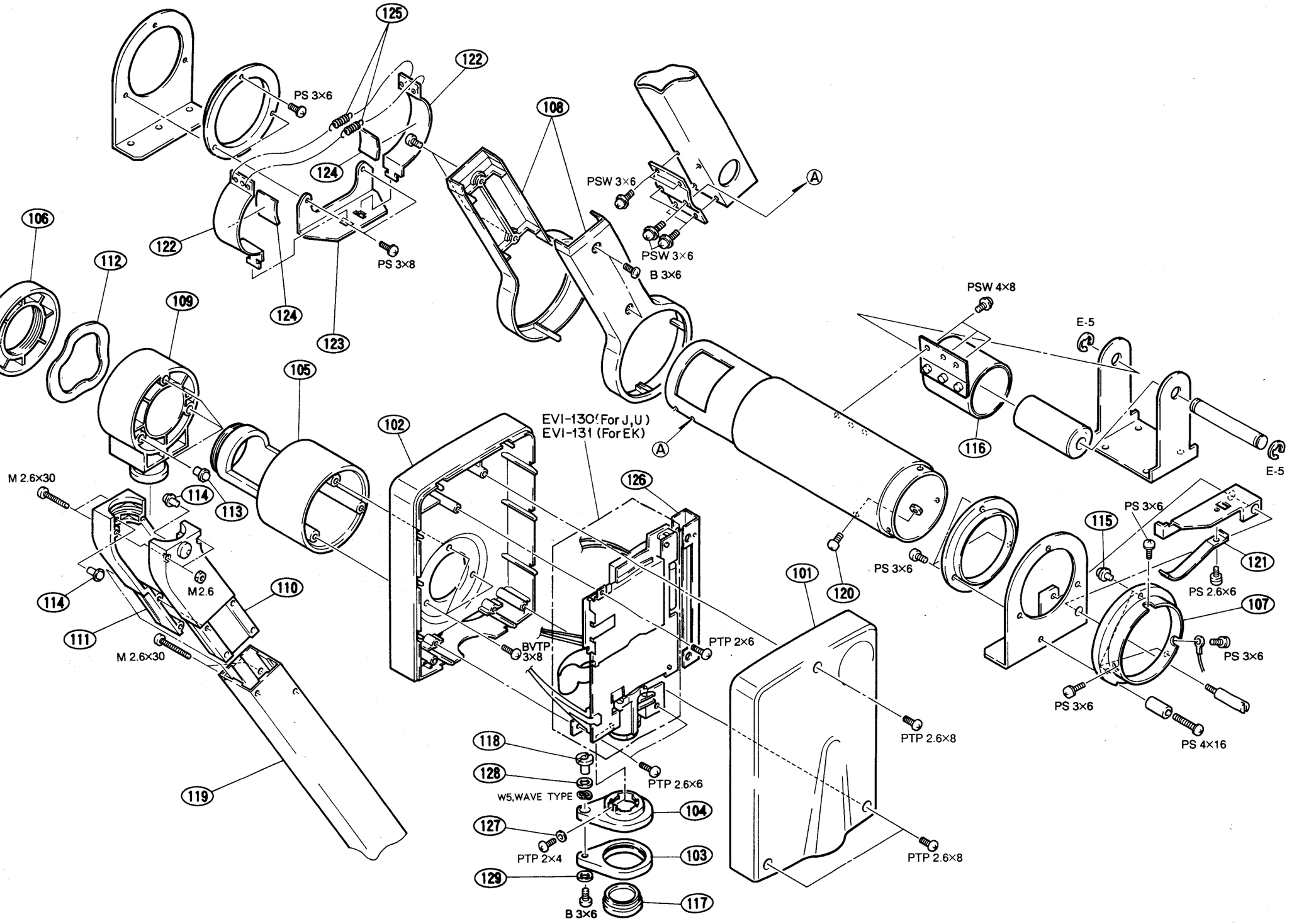
---
CABINET AND BOARD BLOCK
---
1)

| No. | Part No. | SP | Description |
|---|---|---|---|
| 1 | A-8314-823-A | o | MOUNTED CIRCUIT BOARD,MA-67 |
| 2 | A-8314-846-A | o | COVER ASSY |
| 3 | A-8314-847-A | o | TABLE ASSY(FOR J MODEL ONLY) |
| | A-8314-848-A | o | TABLE ASSY(FOR U,EK MODEL ONLY) |
| 4 | A-8314-860-A | o | HANDLE ASSY |
| 5 | A-8314-863-A | o | MOUNTED CIRCUIT BOARD,SY-209 |
| 6 | A-8314-865-A | o | MOUNTED CIRCUIT BOARD,VSW-42(FOR J,U MODEL ONLY) |
| | A-8314-866-A | o | MOUNTED CIRCUIT BOARD,VSW-42(FOR EK MODEL ONLY) |
| 7 | A-8314-871-A | o | MOUNTED CIRCUIT BOARD,PS-355 |
| 8 | A-8314-882-A | o | MOUNTED CIRCUIT BOARD,IO-100 |
| 9 | X-3167-680-1 | o | SHIELD SHEET ASSY |
| 10 | ⚠1-426-974-11 | s | TRANSFORMER,POWER(FOR J,U MODEL ONLY) |
| | ⚠1-426-973-11 | s | TRANSFORMER,POWER(FOR EK MODEL ONLY) |
| 11 | 1-517-372-11 | s | FLUORESCENT LAMP(8W) |
| 12 | ⚠1-526-920-12 | s | AC OUTLET(WITH EARTH) |
| 13 | ⚠1-570-743-21 | s | SWITCH,AC POWER |
| 14 | ⚠1-580-375-11 | s | INLET 3P |
| 15 | 1-654-275-11 | o | PRINTED CIRCUIT BOARD,KSW-26 |
| 16 | 1-654-276-11 | o | PRINTED CIRCUIT BOARD,KSW-27 |
| 17 | 1-654-278-11 | o | PRINTED CIRCUIT BOARD,FU-61 |
| 18 | 1-654-283-11 | o | PRINTED CIRCUIT BOARD,CN-1078 |
| 19 | 1-692-257-11 | s | SWITCH,PUSH(ZOOM) |
| 20 | 1-769-205-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |
| 21 | 1-769-206-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |
| 22 | 1-769-207-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |
| 23 | 3-186-155-01 | o | CHASSIS |
| 24 | 3-186-510-01 | o | KNOB |
| 25 | 3-186-520-01 | o | VR KNOB |
| 26 | 3-186-615-01 | o | BRACKET,GROUND |
| 27 | 3-186-632-01 | o | BRACKET,LAMP HOLDING |
| 28 | 3-186-638-01 | o | SPACER,ZOOM SWITCH |
| 29 | 3-186-639-01 | o | PLATE,SHIELD,MICRPHONE(B) |
| 30 | 3-186-640-01 | o | PLATE,SHIELD,MICROPHONE(A) |
| 31 | 3-186-641-02 | o | STAG,PLATE |
| 32 | 3-186-651-02 | o | PANEL,CONTROL(FOR J MODEL ONLY) |
| | 3-186-650-02 | o | PANEL,CONTROL(FOR U,EK MODEL ONLY) |
| 33 | 3-186-654-03 | o | PANEL,BACK(FOR J MODEL ONLY) |
| | 3-186-655-03 | o | PANEL,BACK(FOR EK MODEL ONLY) |
| | 3-186-653-03 | o | PANEL,BACK(FOR U MODEL ONLY) |
| 34 | 3-186-657-02 | o | REFLECTOR |
| 35 | 3-187-688-01 | s | SHEET,CONDUCTIVE |
| 36 | 3-187-689-01 | s | SPRING,CONTACT |
| 37 | 3-447-073-00 | s | SPRING,TENSION |
| 38 | 3-644-407-00 | o | CLIP,AC WIRE E |
| 39 | 3-682-930-00 | o | LEG,RUBBER(ROUND) |
| 40 | 3-703-397-01 | s | STOPPER,WIRING |

## CABINET AND BOARDS BLOCK



## DRUM AND CAMERA BLOCK



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DRUM AND CAMERA BLOCK
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2)

| No. | Part No. | SP | Description |
|---|---|---|---|
| 101 | 3-186-511-01 | o | CASE(B) |
| 102 | 3-186-512-01 | o | CASE(A) |
| 103 | 3-186-513-01 | o | FRAME,C LENS |
| 104 | 3-186-514-01 | o | ADAPTOR,C LENS |
| 105 | 3-186-515-01 | o | PIPE SHAFT |
| 106 | 3-186-516-01 | o | CAP |
| 107 | 3-186-518-01 | o | RING,CLICK |
| 108 | 3-186-519-01 | o | COVER,ARM |
| 109 | 3-186-521-01 | o | BEARING(A) |
| 110 | 3-186-522-01 | o | JOINT(B) |
| 111 | 3-186-523-01 | o | JOINT(A) |
| 112 | 3-186-616-01 | s | WAVED WASHER(BWW6303) |
| 113 | 3-186-617-01 | s | SOLENOID,BALL |
| 114 | 3-186-618-01 | s | SOLENOID,BALL |
| 115 | 3-186-619-01 | s | SOLENOID,BALL |
| 116 | 3-186-624-01 | o | SPRING |
| 117 | 3-186-635-01 | s | LENS,CLOSE UP |
| 118 | 3-186-637-01 | o | SCREW,FITTING |
| 119 | 3-186-642-01 | o | ARM |
| 120 | 3-186-790-01 | o | STOPPER |
| 121 | 3-186-792-01 | o | SPRING,PLATE,STOPPER |
| 122 | 3-187-377-01 | o | ARM,BRAKE |
| 123 | 3-187-378-01 | o | BRAKET,BRAKE |
| 124 | 3-187-379-01 | s | SHOE,BRAKE |
| 125 | 3-437-288-00 | o | SPRING,TENSION |
| 126 | 3-187-646-01 | o | PLATE,CAMERA PROTECTION |
| 127 | 3-701-437-01 | s | WASHER POLY 2MM DIA.,0.13T |
| 128 | 3-701-443-01 | s | WASHER POLY 5MM DIA.,0.13T |
| 129 | 3-701-443-11 | s | WASHER POLY 5MM DIA.,0.25T |

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LIGHTING(RIGHT/LEFT) BLOCK
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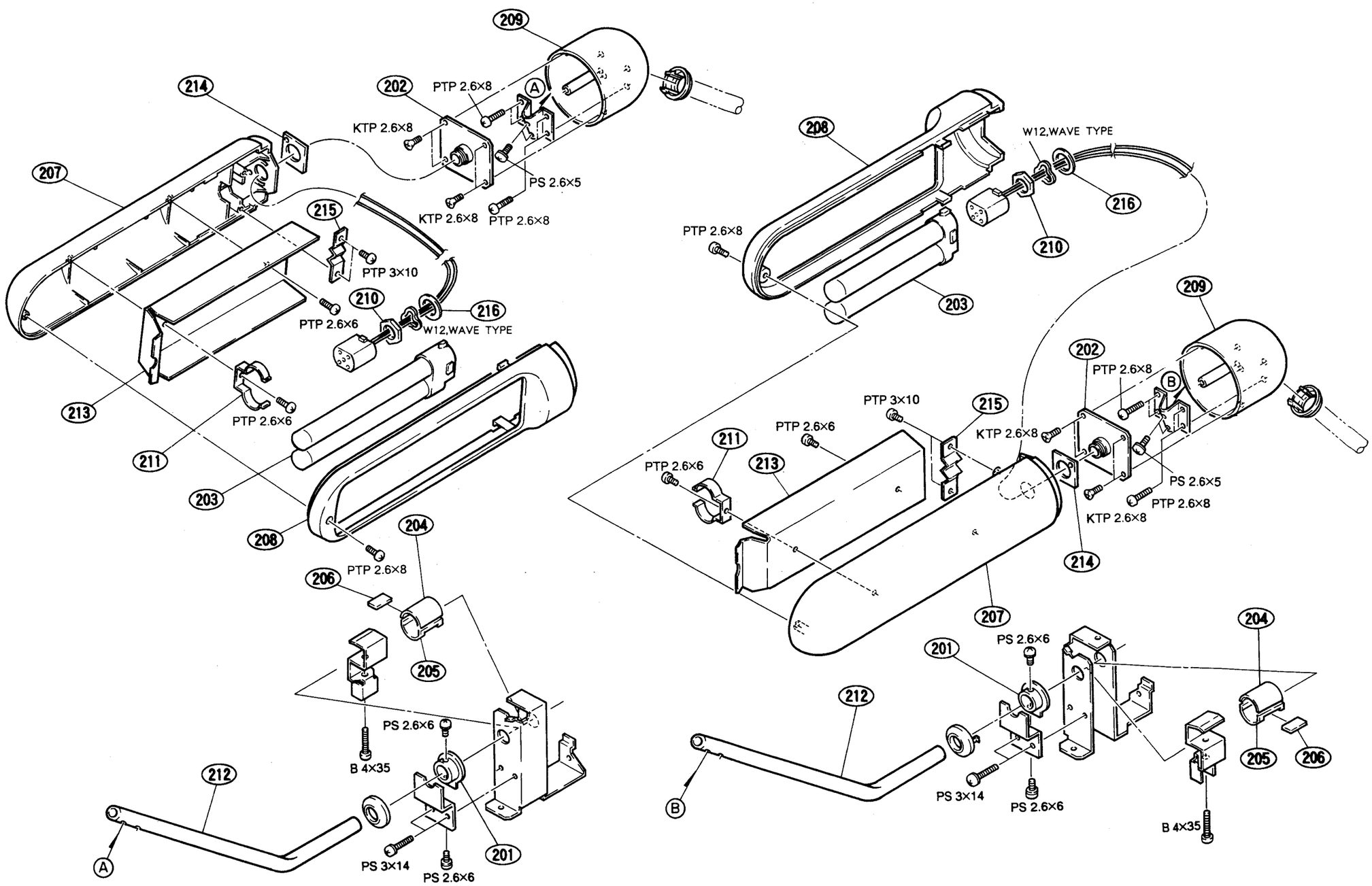
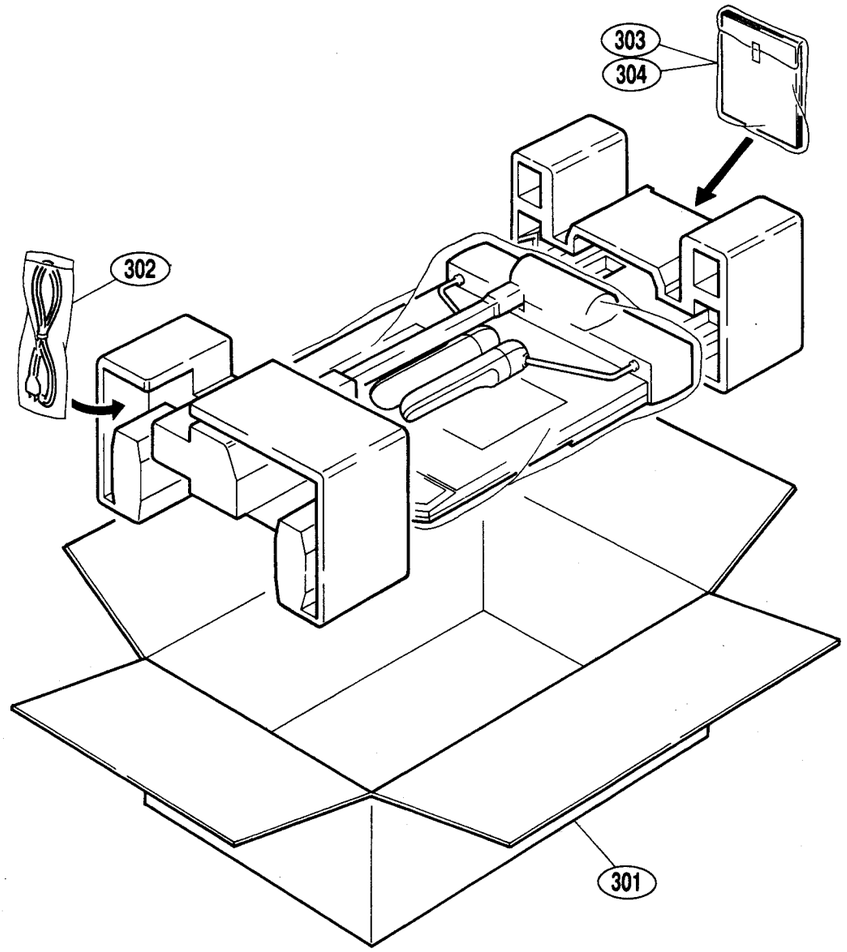
3)

| No. | Part No. | SP | Description |
|---|---|---|---|
| 201 | X-3167-619-1 | o | ASSY,ROTARYSTOPPER |
| 202 | X-3167-625-1 | o | JOINT ASSY,SHADE |
| 203 | 1-517-371-11 | s | FLUORESCENT LAMP(9W) |
| 204 | 3-176-689-01 | o | SHOE(UPPER),BRAKE |
| 205 | 3-176-690-01 | o | SHOE(LOWER),BRAKE |
| 206 | 3-176-692-01 | o | SUPPORT,BRAKE |
| 207 | 3-186-531-01 | o | LAMP SHADE A |
| 208 | 3-186-532-01 | o | LAMP SHADE B |
| 209 | 3-186-533-01 | o | LAMP SHADE |
| 210 | 3-186-628-01 | o | NUT,M10 |
| 211 | 3-186-629-01 | o | BRACKET,LAMP HOLDING |
| 212 | 3-186-646-01 | o | ARM,LAMP |
| 213 | 3-186-647-01 | o | REFLECTOR |
| 214 | 3-187-341-01 | o | PLATE,FRICTION |
| 215 | 3-187-342-01 | o | PLATE,FIXED,SOCKET |
| 216 | 3-701-448-21 | o | WASHER POLY 12MM DIA.,0.5T |

## LIGHTING (RIGHT/LEFT) BLOCK



## PACKING MATERIALS AND ACCESSORIES

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PACKING MATERIALS AND ACCESSORIES
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| No. | Part No. | SP | Description |
|---|---|---|---|
| 301 | 3-187-647-01 | o | INDIVIDUAL CARTON |
| 302 | ⚠1-534-754-00 | s | POWER CORD(FOR J MODEL ONLY) |
| | ⚠1-551-812-11 | s | CORD,POWER(FR U MODEL ONLY) |
| | ⚠1-590-910-11 | s | CORD SET,POWER(FOR EK MODEL) |
| 303 | 3-759-901-01 | s | MANUAL,INSTRUCTION(FOR J MODEL ONLY) |
| | 3-759-901-11 | s | MANUAL,INSTRUCTION(FOR U,EK MODEL ONLY) |
| 304 | 3-187-690-01 | s | MANUAL,INTERFACE(FOR J MODEL ONLY) |
| | 3-187-690-11 | s | MANUAL,INTERFACE(FOR U,EK MODEL ONLY) |

## 7-3. ELECTRICAL PARTS LIST

CN-1078 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | 1-654-283-11 | o | PRINTED CIRCUIT BOARD,CN-1078 |
| CN851 | 1-563-161-11 | s | CONNECTOR,D-SUB(MOUNT TYPE) 25P |
| CN852 | 1-563-593-11 | s | CONNECTOR,FLEXIBLE 16P |
| S851 | 1-571-790-11 | s | SWITCH,DIP 8P |

FU-61 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | 1-654-278-11 | o | PRINTED CIRCUIT BOARD,FU-61 |
| 2pcs | ⚠1-533-189-11 | s | HOLDER,FUSE |
| C151 | 1-161-742-00 | s | CERAMIC 0.0022uF 20% 400V |
| C152 | 1-161-742-00 | s | CERAMIC 0.0022uF 20% 400V |
| C153 | 1-161-742-00 | s | CERAMIC 0.0022uF 20% 400V |
| C154 | 1-161-742-00 | s | CERAMIC 0.0022uF 20% 400V |
| CN153 | ⚠1-564-214-11 | o | PIN,CONNECTOR(B3PS-VH) 3P |
| CN154 | ⚠1-564-216-00 | o | PIN,CONNECTOR 5P |

IO-100 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | A-8314-882-A | o | MOUNTED CIRCUIT BOARD,IO-100 |
| C401 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C402 | 1-126-301-11 | s | ELECT 1uF 20% 50V |
| C403 | 1-126-301-11 | s | ELECT 1uF 20% 50V |
| C404 | 1-126-301-11 | s | ELECT 1uF 20% 50V |
| C405 | 1-126-301-11 | s | ELECT 1uF 20% 50V |
| C406 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C407 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C408 | 1-126-301-11 | s | ELECT 1uF 20% 50V |
| C409 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C410 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C411 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C412 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C413 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C414 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C415 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C416 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C417 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C418 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C419 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| C420 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C421 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C422 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C423 | 1-164-066-11 | s | CERAMIC 68pF 5% 50V |
| C424 | 1-164-066-11 | s | CERAMIC 68pF 5% 50V |
| C425 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C426 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C427 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C428 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C429 | 1-126-157-11 | s | ELECT 10uF 20% 16V |
| CN401 | 1-564-013-11 | o | PIN,CONNECTOR 3P |
| CN402 | 1-506-489-11 | s | CONNECTOR,10P,MALE |
| CN403 | 1-506-490-21 | s | CONNECTOR,11P,MALE |
| CN404 | 1-573-590-12 | s | CONNECTOR,(S)TERMINAL 4P |
| CN405 | 1-573-590-12 | s | CONNECTOR,(S)TERMINAL 4P |
| CN406 | 1-573-590-12 | s | CONNECTOR,(S)TERMINAL 4P |
| CN407 | 1-506-481-11 | s | CONNECTOR,2P,MALE |
| CN408 | 1-506-481-11 | s | CONNECTOR,2P,MALE |
| IC401 | 8-759-000-48 | s | IC MC14052BCP |
| IC402 | 8-759-140-53 | s | IC MC14053BCP |
| IC403 | 8-759-705-58 | s | IC NJM4558D-D |
| IC404 | 8-759-708-05 | s | IC NJM78L05A |
| J401 | 1-770-065-11 | s | JACK,PIN 3P |
| J402 | 1-770-065-11 | s | JACK,PIN 3P |
| J403 | 1-770-065-11 | s | JACK,PIN 3P |
| J404 | 1-691-274-11 | s | CONNECTOR ASSY(BNC) 1P |
| L401 | 1-410-517-11 | s | INDUCTOR 47uH |
| Q401 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE |
| Q402 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE |
| Q403 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE |
| R401 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R402 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R403 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R404 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R405 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R406 | 1-247-887-00 | s | CARBON 220K 5% 1/4W |

(IO-100 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| R407 | 1-247-887-00 | s | CARBON 220K 5% 1/4W |
| R408 | 1-247-887-00 | s | CARBON 220K 5% 1/4W |
| R409 | 1-247-887-00 | s | CARBON 220K 5% 1/4W |
| R410 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R411 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R412 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R414 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R415 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R416 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R417 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R418 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R419 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R420 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R421 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R422 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R423 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R424 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R425 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R426 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R427 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R428 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R429 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R430 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R431 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R432 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R433 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R434 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R435 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R436 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R437 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R438 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R439 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R440 | 1-249-437-11 | s | CARBON 47K 5% 1/4W |
| R441 | 1-249-431-11 | s | CARBON 15K 5% 1/4W |
| R442 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R446 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |
| R447 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |
| R448 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |
| R449 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R450 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R451 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R452 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R453 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R454 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R455 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R456 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R457 | 1-215-394-00 | s | METAL 75 1% 1/6W |
| R458 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R459 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R460 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R461 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R462 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R463 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R464 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R465 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R466 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R467 | 1-247-807-31 | s | CARBON 100 5% 1/4W |
| R468 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R469 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |

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KSW-26 BOARD

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| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | 1-654-275-11 | o | PRINTED CIRCUIT BOARD,KSW-26 |
| 1pc | 3-186-638-01 | o | SPACER,ZOOM SWITCH |
| 2pcs | 7-628-253-30 | s | SCREW +PS 2x8 |
| 2pcs | 7-622-205-05 | s | NUT M2 TYPE2 |
| C601 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C602 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C603 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C604 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C605 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C606 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C607 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C608 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C609 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C610 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C611 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| CN601 | 1-563-619-11 | s | CONNECTOR,FLEXIBLE 16P |
| CN602 | 1-563-995-11 | s | CONNECTOR,FPC(ZIF) 5P |
| D601 | 8-719-800-24 | s | DIODE TLR147 |
| D602 | 8-719-800-24 | s | DIODE TLR147 |
| R601 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R602 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| S601 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S602 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S603 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S604 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S605 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S606 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S607 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S608 | 1-692-257-11 | s | SWITCH,PUSH(ZOOM) |

## KSW-27 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | 1-654-276-11 | o | PRINTED CIRCUIT BOARD,KSW-27 |
| C652 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C653 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C654 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C657 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C658 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C659 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| CN651 | 1-563-623-11 | s | CONNECTOR,FLEXIBLE 20P |
| D651 | 8-719-800-24 | s | DIODE TLR147 |
| D652 | 8-719-800-24 | s | DIODE TLR147 |
| D653 | 8-719-800-24 | s | DIODE TLR147 |
| D654 | 8-719-800-24 | s | DIODE TLR147 |
| D655 | 8-719-800-24 | s | DIODE TLR147 |
| D656 | 8-719-800-24 | s | DIODE TLR147 |
| D657 | 8-719-800-24 | s | DIODE TLR147 |
| D658 | 8-719-800-24 | s | DIODE TLR147 |
| R651 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R652 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R653 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R654 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R655 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R656 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R657 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| R658 | 1-249-416-11 | s | CARBON 820 5% 1/4W |
| S652 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S653 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S654 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S657 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S658 | 1-570-969-11 | s | SWITCH,KEY BOARD |
| S659 | 1-570-969-11 | s | SWITCH,KEY BOARD |

## MA-67 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | A-8314-823-A | o | MOUNTED CIRCUIT BOARD,MA-67 |
| 1pc | 3-186-520-01 | o | VR KNOB |
| 1pc | 3-186-640-01 | o | PLATE,SHIELD,MICROPHONE(A) |
| 1pc | 3-186-639-01 | o | PLATE,SHIELD,MICROPHONE(B) |
| C801 | 1-124-903-11 | s | ELECT 1uF 20% 50V |
| C802 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C803 | 1-164-068-11 | s | CERAMIC 82pF 5% 50V |
| C804 | 1-124-903-11 | s | ELECT 1uF 20% 50V |
| C805 | 1-124-903-11 | s | ELECT 1uF 20% 50V |
| C806 | 1-164-052-11 | s | CERAMIC 18pF 5% 50V |
| C807 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C808 | 1-126-933-11 | s | ELECT 100uF 20% 16V |
| C809 | 1-164-068-11 | s | CERAMIC 82pF 5% 50V |
| C810 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C811 | 1-164-068-11 | s | CERAMIC 82pF 5% 50V |
| C812 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C813 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C814 | 1-162-294-31 | s | CERAMIC 0.001uF 10% 50V |
| CN801 | 1-564-013-11 | o | PIN,CONNECTOR 3P |
| IC801 | 8-759-705-58 | s | IC NJM4558D-D |
| J801 | 1-507-854-00 | s | JACK,PHONE |
| Q801 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE |
| R801 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R802 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| R803 | 1-249-423-11 | s | CARBON 3.3K 5% 1/4W |
| R804 | 1-249-439-11 | s | CARBON 68K 5% 1/4W |
| R805 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R806 | 1-247-891-00 | s | CARBON 330K 5% 1/4W |
| R807 | 1-249-423-11 | s | CARBON 3.3K 5% 1/4W |
| R808 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R809 | 1-249-411-11 | s | CARBON 330 5% 1/4W |
| RV801 | 1-241-682-11 | s | RES,VAR,CARBON 20K |

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PS-355 BOARD
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| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | A-8314-871-A | o | MOUNTED CIRCUIT BOARD,PS-355 (FOR J,U MODEL ONLY) |
| 1pc | A-8314-872-A | o | MOUNTED CIRCUIT BOARD,PS-355 (FOR EK MODEL ONLY) |
| 2pcs | ⚠1-533-189-11 | s | HOLDER,FUSE |
| C101 | 1-128-556-11 | s | ELECT 1000uF 20% 63V |
| C102 | 1-106-220-00 | s | MYLAR 0.1uF 50% 100V |
| C103 | 1-128-576-11 | s | ELECT 100uF 20% 63V |
| C104 | 1-126-952-11 | s | ELECT 1000uF 20% 35V |
| C105 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C106 | 1-126-952-11 | s | ELECT 1000uF 20% 35V |
| C107 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C108 | 1-128-556-11 | s | ELECT 1000uF 20% 63V |
| C109 | 1-106-220-00 | s | MYLAR 0.1uF 50% 100V |
| C110 | 1-128-576-11 | s | ELECT 100uF 20% 63V |
| C111 | 1-126-952-11 | s | ELECT 1000uF 20% 35V |
| C112 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C113 | 1-126-951-11 | s | ELECT 470uF 20% 35V |
| C114 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C115 | 1-130-959-00 | s | FILM 0.047uF 10% 400V |
| C116 | 1-130-959-00 | s | FILM 0.047uF 10% 400V |
| C117 | 1-164-646-11 | s | CERAMIC 2200pF 10% 500V |
| C118 | 1-164-646-11 | s | CERAMIC 2200pF 10% 500V |
| C119 | 1-164-646-11 | s | CERAMIC 2200pF 10% 500V |
| C120 | 1-164-646-11 | s | CERAMIC 2200pF 10% 500V |
| C121 | 1-164-735-11 | s | CERAMIC 1500pF 10% 500V |
| C122 | 1-164-735-11 | s | CERAMIC 1500pF 10% 500V |
| C123 | 1-164-735-11 | s | CERAMIC 1500pF 10% 500V |
| C124 | 1-164-735-11 | s | CERAMIC 1500pF 10% 500V |
| C125 | 1-162-294-31 | s | CERAMIC 0.001uF 10% 50V |
| C126 | 1-162-294-31 | s | CERAMIC 0.001uF 10% 50V |
| C127 | 1-128-576-11 | s | ELECT 100uF 20% 63V |
| CN101 | 1-564-321-00 | s | PIN,CONNECTOR 2P |
| CN102 | 1-564-001-11 | o | CONNECTOR,2P,MALE |
| CN103 | 1-564-001-11 | o | CONNECTOR,2P,MALE |
| CN104 | 1-564-321-00 | s | PIN,CONNECTOR 2P |
| CN105 | 1-564-321-00 | s | PIN,CONNECTOR 2P |
| CN106 | 1-564-905-11 | o | PIN,CONNECTOR 9P |
| CN107 | 1-564-002-11 | s | PIN,CONNECTOR 3P |
| D101 | 8-719-312-47 | s | DIODE RBA-406B |
| D102 | 8-719-981-00 | s | DIODE ERC81-004 |
| D103 | 8-719-981-00 | s | DIODE ERC81-004 |
| D104 | 8-719-200-82 | s | DIODE 11ES2 |
| D105 | 8-719-200-82 | s | DIODE 11ES2 |
| D106 | 8-719-200-82 | s | DIODE 11ES2 |
| IC101 | 8-759-293-96 | s | IC LM2575HVT-ADJLB03 |
| IC102 | 8-759-293-96 | s | IC LM2575HVT-ADJLB03 |
| L101 | 1-411-133-11 | s | COIL,CHOKE |
| L102 | 1-402-764-11 | s | COIL,CHOKE 120uH |
| L103 | 1-411-133-11 | s | COIL,CHOKE |
| L104 | 1-402-764-11 | s | COIL,CHOKE 120uH |
| Q101 | 8-729-133-42 | s | TRANSISTOR 2SC2334-L |
| Q102 | 8-729-133-42 | s | TRANSISTOR 2SC2334-L |
| Q103 | 8-729-322-38 | s | TRANSISTOR 2SK975 |
| R101 | 1-215-449-00 | s | METAL 15K 1% 1/6W |
| R102 | 1-215-430-00 | s | METAL 2.4K 1% 1/6W |

(PS-355 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| R103 | 1-215-458-00 | s | METAL 36K 1% 1/6W |
| R104 | 1-215-430-00 | s | METAL 2.4K 1% 1/6W |
| R105 | 1-249-420-11 | s | CARBON 1.8K 5% 1/4W |
| R106 | 1-249-420-11 | s | CARBON 1.8K 5% 1/4W |
| R107 | 1-249-406-11 | s | CARBON 120 5% 1/4W |
| R108 | 1-249-411-11 | s | CARBON 330 5% 1/4W |
| R109 | 1-249-441-11 | s | CARBON 100K 5% 1/4W |
| RY101 | 1-755-024-11 | s | RELAY,POWER |
| T101 | 1-427-698-11 | s | TRANSFORMER,INVERTER |

SY-209 BOARD

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | A-8314-863-A | o | MOUNTED CIRCUIT BOARD,SY-209 |
| C1 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C2 | 1-126-948-11 | s | ELECT 100uF 20% 35V |
| C3 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C4 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C5 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C6 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C7 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C8 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C9 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C10 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C11 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C12 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C13 | 1-124-903-11 | s | ELECT 1uF 20% 50V |
| C14 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C15 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C16 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C17 | 1-126-964-11 | s | ELECT 10uF 20% 50V |
| C18 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C19 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| C20 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| C21 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| C22 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| C23 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| C24 | 1-162-289-31 | s | CERAMIC 390pF 10% 50V |
| CN1 | 1-563-593-11 | s | CONNECTOR,FLEXIBLE 16P |
| CN2 | 1-563-597-11 | s | CONNECTOR,FLEXIBLE 20P |
| CN3 | 1-506-479-11 | s | CONNECTOR,14P,MALE(STRAIGHT TYPE) |
| CN4 | 1-564-007-11 | o | PIN,CONNECTOR 8P |
| CN5 | 1-564-001-11 | o | CONNECTOR,2P,MALE |
| CN6 | 1-563-593-11 | s | CONNECTOR,FLEXIBLE 16P |
| CN7 | 1-506-472-11 | s | CONNECTOR,7P,MALE |
| CN8 | 1-564-002-11 | s | PIN,CONNECTOR 3P |
| CNI1 | 1-526-950-11 | o | SOCKET,IC 64P |
| D1 | 8-719-812-41 | s | LED TLR124,RED |
| D2 | 8-719-812-41 | s | LED TLR124,RED |
| D3 | 8-719-812-41 | s | LED TLR124,RED |
| D4 | 8-719-918-88 | s | DIODE 1SS198 |
| D5 | 8-719-918-88 | s | DIODE 1SS198 |
| D6 | 8-719-918-88 | s | DIODE 1SS198 |
| D7 | 8-719-918-88 | s | DIODE 1SS198 |
| IC1 | 8-759-292-92 | s | IC M38002E4SP |
| IC2 | 8-759-701-56 | s | IC NJM78M05FA |
| IC3 | 8-759-908-35 | s | IC TL7705CP-B |
| IC4 | 8-759-972-58 | s | IC MAX238CNG |
| IC5 | 8-759-916-20 | s | IC SN74HC14AN |
| IC6 | 8-759-104-05 | s | IC UPD6325C |
| IC7 | 8-759-917-06 | s | IC SN74HC574AN |
| IC8 | 8-759-917-06 | s | IC SN74HC574AN |
| IC9 | 8-759-917-06 | s | IC SN74HC574AN |
| IC10 | 8-759-917-43 | s | IC SN74HC138AN |
| IC11 | 8-759-921-81 | s | IC SN74HC4066N |
| IC12 | 8-759-921-81 | s | IC SN74HC4066N |
| IC13 | 8-759-708-06 | s | IC NJM78L06A |
| R1 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |
| R2 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |

(SY-209 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| R3 | 1-249-421-11 | s | CARBON 2.2K 5% 1/4W |
| R4 | 1-249-435-11 | s | CARBON 33K 5% 1/4W |
| R5 | 1-249-432-11 | s | CARBON 18K 5% 1/4W |
| R6 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R7 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R8 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R9 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R10 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R11 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R12 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R13 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R14 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R15 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R16 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R17 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R18 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R19 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R20 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R21 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R22 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R23 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R24 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R25 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R26 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R27 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R28 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R29 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R30 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R31 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R32 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R33 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R34 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R35 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R36 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R37 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R38 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R39 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R40 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R41 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R42 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R43 | 1-249-414-11 | s | CARBON 560 5% 1/4W |
| R44 | 1-249-414-11 | s | CARBON 560 5% 1/4W |
| R45 | 1-249-414-11 | s | CARBON 560 5% 1/4W |
| R46 | 1-249-414-11 | s | CARBON 560 5% 1/4W |
| R47 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R48 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R49 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R50 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R51 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R52 | 1-249-404-00 | s | CARBON 82 5% 1/4W |
| R53 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R54 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R55 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R56 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R57 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R58 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R59 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R60 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |
| R61 | 1-249-429-11 | s | CARBON 10K 5% 1/4W |

(SY-209 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| R62 | 1-249-435-11 | s | CARBON 33K 5% 1/4W |
| R63 | 1-249-419-11 | s | CARBON 1.5K 5% 1/4W |
| R64 | 1-247-414-11 | s | CARBON 560 5% 1/4W |
| RB1 | 1-231-533-00 | s | RESISTOR BLOCK 10Kx4 |
| RB2 | 1-235-195-00 | s | RESISTOR BLOCK 10Kx8 |
| RB3 | 1-235-195-00 | s | RESISTOR BLOCK 10Kx8 |
| RB4 | 1-235-195-00 | s | RESISTOR BLOCK 10Kx8 |
| RB5 | 1-231-533-00 | s | RESISTOR BLOCK 10Kx4 |
| RB6 | 1-231-533-00 | s | RESISTOR BLOCK 10Kx4 |
| RB7 | 1-235-195-00 | s | RESISTOR BLOCK 10Kx8 |
| RB8 | 1-235-195-00 | s | RESISTOR BLOCK 10Kx8 |
| RB9 | 1-231-533-00 | s | RESISTOR BLOCK 10Kx4 |
| S1 | 1-570-598-11 | s | SWITCH,DIP 4-CKT |
| X1 | 1-579-530-11 | s | VIBRATOR,CERAMIC |

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VSW-42 BOARD
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| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| 1pc | A-8314-865-A | o | MOUNTED CIRCUIT BOARD,VSW-42 (FOR J,U MODEL ONLY) |
| 1pc | A-8314-866-A | o | MOUNTED CIRCUIT BOARD,VSW-42 (FOR EK MODEL ONLY) |
| C201 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C202 | 1-164-035-11 | s | CERAMIC 47pF 5% 50V |
| C203 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C204 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C205 | 1-164-019-11 | s | CERAMIC 10pF 0.5pF 50V |
| C206 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C207 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C208 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C209 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C210 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C211 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C212 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C214 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C215 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C216 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C217 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C218 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C219 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C220 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C221 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C222 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C223 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C224 | 1-164-085-11 | s | CERAMIC 0.001uF 10% 50V |
| C225 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C226 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C227 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C228 | 1-164-023-11 | s | CERAMIC 15pF 5% 50V |
| C229 | 1-164-023-11 | s | CERAMIC 15pF 5% 50V |
| C230 | 1-164-019-11 | s | CERAMIC 10pF 0.5pF 50V |
| C231 | 1-164-019-11 | s | CERAMIC 10pF 0.5pF 50V |
| C232 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C233 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C234 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C235 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C236 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C237 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C238 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C239 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C240 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C241 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C242 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C243 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C244 | 1-164-159-11 | s | CERAMIC 0.1uF 50V |
| C245 | 1-164-027-11 | s | CERAMIC 22pF 5% 50V |
| C246 | 1-164-027-11 | s | CERAMIC 22pF 5% 50V |
| C247 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C248 | 1-164-027-11 | s | CERAMIC 22pF 5% 50V |
| C249 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C250 | 1-128-499-11 | s | ELECT 220uF 20% 16V |
| C251 | 1-126-926-11 | s | ELECT 1000uF 20% 10V |
| C252 | 1-126-926-11 | s | ELECT 1000uF 20% 10V |
| C253 | 1-126-096-11 | s | ELECT 10uF 20% 35V |
| C254 | 1-126-786-11 | s | ELECT 47uF 20% 16V |
| C255 | 1-164-031-11 | s | CERAMIC 33pF 5% 50V |
| C256 | 1-126-786-11 | s | ELECT 47uF 20% 16V |

(VSW-42 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description | | | |
|---|---|---|---|---|---|---|
| C257 | 1-164-019-11 | s | CERAMIC | 10pF | 0.5pF | 50V |
| C258 | 1-126-926-11 | s | ELECT | 100uF | 20% | 50V |
| C259 | 1-128-499-11 | s | ELECT | 220uF | 20% | 16V |
| C260 | 1-126-926-11 | s | ELECT | 1000uF | 20% | 10V |
| C261 | 1-126-786-11 | s | ELECT | 47uF | 20% | 16V |
| C262 | 1-126-096-11 | s | ELECT | 10uF | 20% | 35V |
| C263 | 1-126-786-11 | s | ELECT | 47uF | 20% | 16V |
| C264 | 1-126-786-11 | s | ELECT | 47uF | 20% | 16V |
| C265 | 1-126-786-11 | s | ELECT | 47uF | 20% | 16V |
| C266 | 1-164-027-11 | s | CERAMIC | 22pF | 5% | 50V |
| | | | (FOR J,U MODEL ONLY) | | | |
| C267 | 1-126-096-11 | s | ELECT | 10uF | 20% | 35V |
| C268 | 1-128-499-11 | s | ELECT | 220uF | 20% | 16V |
| C269 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C270 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C271 | 1-126-786-11 | s | ELECT | 47uF | 20% | 16V |
| C272 | 1-128-499-11 | s | ELECT | 220uF | 20% | 16V |
| C273 | 1-128-499-11 | s | ELECT | 220uF | 20% | 16V |
| C274 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C275 | 1-126-096-11 | s | ELECT | 10uF | 20% | 35V |
| C276 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C277 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C278 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C279 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| C280 | 1-128-499-11 | s | ELECT | 220uF | 20% | 16V |
| C281 | 1-164-159-11 | s | CERAMIC | 0.1uF | | 50V |
| CN201 | 1-564-005-11 | o | PIN,CONNECTOR 6P | | | |
| CN202 | 1-506-472-11 | s | CONNECTOR,7P,MALE | | | |
| CN203 | 1-564-001-11 | o | CONNECTOR,2P,MALE | | | |
| CN204 | 1-564-009-11 | o | PIN,CONNECTOR 10P | | | |
| CN205 | 1-506-476-11 | o | PIN,CONNECTOR 11P | | | |
| CT201 | 1-141-245-00 | s | CAP,TRIMMER 30pF | | | |
| D201 | 8-719-200-82 | s | DIODE 11ES2 | | | |
| D202 | 8-719-200-82 | s | DIODE 11ES2 | | | |
| IC201 | 8-759-262-03 | s | IC MC14577CF | | | |
| IC202 | 8-759-011-65 | s | IC MC74HC4053F | | | |
| IC203 | 8-759-011-65 | s | IC MC74HC4053F | | | |
| IC204 | 8-759-987-27 | s | IC LM1881M | | | |
| IC205 | 8-759-239-58 | s | IC TC74HC221AF | | | |
| IC206 | 8-752-332-67 | s | IC CXD1217M | | | |
| IC207 | 8-759-198-31 | s | IC UPC1093J-1-T | | | |
| IC208 | 8-759-011-65 | s | IC MC74HC4053F | | | |
| IC209 | 8-759-238-55 | s | IC TC74HC4052AF(EL) | | | |
| IC210 | 8-759-262-03 | s | IC MC14577CF | | | |
| IC211 | 8-759-262-03 | s | IC MC14577CF | | | |
| IC212 | 8-759-925-74 | s | IC SN74HC04ANS | | | |
| IC213 | 8-759-927-46 | s | IC SN74HC00ANS | | | |
| IC214 | 8-759-927-46 | s | IC SN74HC00ANS | | | |
| IC215 | 8-759-701-56 | s | IC NJM78M05FA | | | |
| L201 | 1-410-517-11 | s | INDUCTOR 47uH | | | |
| L202 | 1-410-517-11 | s | INDUCTOR 47uH | | | |
| L203 | 1-410-517-11 | s | INDUCTOR 47uH | | | |
| Q201 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q202 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q203 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q204 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q205 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |

(VSW-42 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description | | | |
|---|---|---|---|---|---|---|
| Q206 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q207 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q208 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q209 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q210 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q211 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q212 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q213 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q214 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q215 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q216 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q217 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q218 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q219 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q220 | 8-729-119-76 | s | TRANSISTOR 2SA1115-HFE | | | |
| Q221 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q222 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q223 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q224 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q225 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q226 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q227 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q228 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q229 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q230 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q231 | 8-729-119-78 | s | TRANSISTOR 2SC2785-HFE | | | |
| Q232 | 8-729-900-80 | s | TRANSISTOR DTC114ES | | | |
| Q233 | 8-729-900-80 | s | TRANSISTOR DTC114ES | | | |
| R201 | 1-215-394-00 | s | METAL | 75 | 1% | 1/6W |
| R202 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R203 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R204 | 1-249-415-11 | s | CARBON | 680 | 5% | 1/4W |
| R205 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R206 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R207 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R208 | 1-249-422-11 | s | CARBON | 2.7K | 5% | 1/4W |
| R209 | 1-249-414-11 | s | CARBON | 560 | 5% | 1/4W |
| R210 | 1-249-414-11 | s | CARBON | 560 | 5% | 1/4W |
| R211 | 1-249-422-11 | s | CARBON | 2.7K | 5% | 1/4W |
| R212 | 1-249-418-11 | s | CARBON | 1.2K | 5% | 1/4W |
| R213 | 1-249-419-11 | s | CARBON | 1.5K | 5% | 1/4W |
| R214 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R215 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R216 | 1-247-807-31 | s | CARBON | 100 | 5% | 1/4W |
| R217 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R218 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R219 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R220 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R221 | 1-215-394-00 | s | METAL | 75 | 1% | 1/6W |
| R222 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R223 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R224 | 1-249-416-11 | s | CARBON | 820 | 5% | 1/4W |
| R225 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R226 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R227 | 1-249-414-11 | s | CARBON | 560 | 5% | 1/4W |
| R228 | 1-249-418-11 | s | CARBON | 1.2K | 5% | 1/4W |
| R229 | 1-249-423-11 | s | CARBON | 3.3K | 5% | 1/4W |
| R230 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |

(VSW-42 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description | | | |
|---|---|---|---|---|---|---|
| R231 | 1-249-409-11 | s | CARBON | 220 | 5% | 1/4W |
| R232 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R233 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R234 | 1-249-423-11 | s | CARBON | 3.3K | 5% | 1/4W |
| R235 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R236 | 1-249-419-11 | s | CARBON | 1.5K | 5% | 1/4W |
| R237 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R238 | 1-249-413-11 | s | CARBON | 470 | 5% | 1/4W |
| R239 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R240 | 1-249-410-11 | s | CARBON | 270 | 5% | 1/4W |
| R241 | 1-249-423-11 | s | CARBON | 3.3K | 5% | 1/4W |
| R242 | 1-249-423-11 | s | CARBON | 3.3K | 5% | 1/4W |
| R243 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R244 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R245 | 1-249-409-11 | s | CARBON | 220 | 5% | 1/4W |
| R246 | 1-247-899-11 | s | CARBON | 680K | 5% | 1/4W |
| R247 | 1-247-807-31 | s | CARBON | 100 | 5% | 1/4W |
| R248 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R249 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R250 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R251 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R252 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R253 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R254 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R255 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R256 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R257 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R258 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R259 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R260 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R261 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R262 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R263 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R264 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R265 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R266 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R267 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R268 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R269 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R270 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R271 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R272 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R273 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R274 | 1-249-419-11 | s | CARBON | 1.5K | 5% | 1/4W |
| R275 | 1-249-419-11 | s | CARBON | 1.5K | 5% | 1/4W |
| R276 | 1-249-420-11 | s | CARBON | 1.8K | 5% | 1/4W |
| R277 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R278 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R279 | 1-249-415-11 | s | CARBON | 680 | 5% | 1/4W |
| R280 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R281 | 1-249-421-11 | s | CARBON | 2.2K | 5% | 1/4W |
| R282 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R283 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R284 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R285 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |

(VSW-42 BOARD)

| Ref. No. or Q'ty | Part No. | SP | Description | | | |
|---|---|---|---|---|---|---|
| R286 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R287 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R288 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R289 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R290 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R291 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R292 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R293 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R294 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R295 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R296 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R297 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R298 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R299 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R300 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R301 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R302 | 1-249-417-11 | s | CARBON | 1K | 5% | 1/4W |
| R303 | 1-249-431-11 | s | CARBON | 15K | 5% | 1/4W |
| R304 | 1-249-429-11 | s | CARBON | 10K | 5% | 1/4W |
| R305 | 1-249-425-11 | s | CARBON | 4.7K | 5% | 1/4W |
| R306 | 1-249-437-11 | s | CARBON | 47K | 55 | 1/4W |
| R307 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R308 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| R309 | 1-249-437-11 | s | CARBON | 47K | 5% | 1/4W |
| RV201 | 1-241-761-11 | s | RES,ADJ,CARBON 1K | | | |
| RV202 | 1-241-761-11 | s | RES,ADJ,CARBON 1K | | | |
| X201 | 1-527-722-00 | s | CRYSTAL 14.31818MHz (FOR J,U MODEL ONLY) | | | |
| | 1-579-056-11 | s | CRISTAL (FOR EK MODEL ONLY) | | | |

## HARNESS

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| | HARNESS(1) CN801/MA-67 board to CN401/IO-100 board | | |
| 2pcs | 1-569-196-11 | o | HOUSING 3P |
| 5pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| 1pc | 1-569-191-11 | o | CONTACT,FEMALE,AWG22-26 |
| | HARNESS(2) NOT SUPPLY | | |
| | HARNESS(3) NOT SUPPLY | | |
| | HARNESS(5) CN8/SY-209 board to CN108/PS-355 board | | |
| 2pcs | 1-569-196-11 | o | HOUSING 3P |
| 4pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| | HARNESS(9) CN7/SY-209 board to CN202/VSW-42 board | | |
| 2pcs | 1-569-200-11 | o | HOUSING 7P |
| 14pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| | HARNESS(12) CN203/VSW-42 board to CN102/PS-355 board | | |
| 2pcs | 1-569-195-11 | o | HOUSING 2P |
| 4pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| | HARNESS(14) CN204/VSW-42 board to CN402/IO-100 board | | |
| 2pcs | 1-569-203-11 | o | HOUSING 10P |
| 16pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| 4pcs | 1-569-191-11 | o | CONTACT,FEMALE,AWG22-26 |
| | HARNESS(15) CN205/VSW-42 board to CN403/IO-100 board | | |
| 2pcs | 1-569-204-11 | o | HOUSING 11P |
| 17pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| 3pcs | 1-569-191-11 | o | CONTACT,FEMALE,AWG22-26 |
| | HARNESS(16) CN106/PS-355 board to BACK LIGHT | | |
| 1pcs | 1-562-800-11 | o | HOUSING 9P |
| 9pcs | 1-562-210-11 | o | CONTACT,FEMALE,AWG18-22 |
| | HARNESS(17) CN104/PS-355 board to LEFT LAMP | | |
| 1pc | 1-562-211-11 | o | HOUSING,VH 3P |
| 2pcs | 1-562-210-11 | o | CONTACT,FEMALE,AWG18-22 |
| | HARNESS(18) CN105/PS-355 board to RIGHT LAMP | | |
| 1pc | 1-562-211-11 | o | HOUSING,VH 3P |
| 2pcs | 1-562-210-11 | o | CONTACT,FEMALE,AWG18-22 |
| | HARNESS(19) CN101/PS-355 board to T1 | | |
| 1pc | 1-562-211-11 | o | HOUSING,VH 3P |
| 2pcs | 1-562-210-11 | o | CONTACT,FEMALE,AWG18-22 |
| | HARNESS(20) CAMERA UNIT to CN3/SY-209 board or CN201/VSW-42 board | | |
| 1pc | 1-569-207-11 | o | HOUSING 14P |
| 21pcs | 1-569-193-11 | o | CONTACT,FEMALE,AWG24-30 |
| 2pcs | 1-569-619-11 | o | HOUSING 4P |
| 17pcs | 1-565-977-11 | s | CONTACT,FEMALE,AWG28-32 |
| 1pc | 1-563-637-11 | o | HOUSING 4P |
| 4pcs | 1-563-634-11 | o | CONTACT,FEMALE,AWG26-32 |
| 1pc | 1-565-978-11 | o | HOUSING 6P |
| 1pc | 1-569-200-11 | o | HOUSING 7P |
| 1pc | 1-569-617-11 | o | HOUSING 2P |

## FRAME

| Ref. No. or Q'ty | Part No. | SP | Description |
|---|---|---|---|
| CN151 | ⚠1-580-375-11 | s | INLET 3P |
| CN152 | ⚠1-526-920-12 | s | AC OUTLET(WITH EARTH) |
| F101 | ⚠1-532-742-11 | s | FUSE 1.6A 125V (FOR J,U PS-355 BOARD) |
| | ⚠1-532-259-00 | s | FUSE,TIME-LAG T1.6A 250V (FOR EK PS-355 BOARD) |
| F151 | ⚠1-532-740-11 | s | FUSE,GLASS TUBE 1A 125V (FOR J,U FU-61 BOARD) |
| | ⚠1-532-284-00 | s | FUSE,TIME-LAG T630mA 250V (FOR EK FU-61 BOARD) |
| S1 | ⚠1-570-743-21 | s | SWITCH,AC POWER |
| T1 | ⚠1-426-974-11 | s | TRANSFORMER,POWER(FOR J,U) |
| | ⚠1-424-976-11 | s | TRANSFORMER,POWER(FOR EK) |
| 1pc | 1-517-372-11 | s | FLUORESCENT LAMP(8W) |
| 1pc | 1-517-371-11 | s | FLUORESCENT LAMP(9W) |
| 1pc | 1-769-205-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |
| 1pc | 1-769-206-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |
| 1pc | 1-769-207-11 | o | WIRE,FLAT TYPE(FFC CONNECTOR) |